

# **Exhibit 2**

**Expert Report of Professor D. Sunshine Hillygus, dated July 23, 2019**

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## **I. Background and Qualifications**

I am a Professor of Political Science and Public Policy at Duke University, where I teach undergraduate and graduate level courses on the topics of public opinion, civic engagement, political communication, and survey methodology. I earned a Ph.D. in political science from Stanford University in 2003. From 2003-2009, I was a faculty member at Harvard University in the Department of Government. In 2009, I joined the faculty at Duke University as an associate professor and was promoted to full professor in 2015.

I have more than 20 years of experience in survey design, implementation, and analysis. Of relevance to this report, I have published research on the topics of census participation, public opinion, communication campaigns, survey methodology, survey non-response, and data quality. This work has been funded by the National Science Foundation and published in respected academic journals including *Public Opinion Quarterly*, *Journal of Survey Statistics and Methodology*, *Statistical Science*, *Political Analysis*, and *Annals of Applied Statistics*. I am co-author of *The Hard Count: The Political and Social Challenges of Census Mobilization* (2006, Russell Sage Foundation). My other experience of relevance includes serving as associate principal investigator of the American National Election Study, on the editorial boards of several academic journals, and as director of the Initiative on Survey Methodology at Duke University. I was also founding director of the Program on Survey Research at Harvard University. From 2012-2018, I served as a member of the Census Scientific Advisory Committee (CSAC), a committee that advises the director of the Census Bureau on the uses of scientific developments in statistical data collection, survey methodology, geospatial and statistical analysis, econometrics, cognitive psychology, business operations and computer science as they pertain to the full range of Census Bureau programs and activities, including census tests, policies and operations.

I previously served as an expert witness in *Civil Action No. 1:13-CV-00660-TDS-JEP (M.D.N.C.) League of Women Voters of North Carolina, et al. v. North Carolina, et al.* and *Civil Action No. 18-CV-2921-JMF State of New York, et al., New York Immigration Coalition, et al., vs. United States Department of Commerce, et al.* A copy of my curriculum vitae is attached, which includes a list of all publications I authored in the last ten years.

I am being compensated at a rate of \$300 per hour with a capped fee of \$30,000.

## **II. Availability of Information**

I have been retained to evaluate the anticipated impact of underfunding and underplanning on the undercount of racial and ethnic minorities in the 2020 Census. To establish an expert opinion in this case, I reviewed a variety of publicly-available materials from academic, governmental, legal, and media sources, as well as a limited amount of information from discovery through litigation. Sources included public Census Bureau reports and analyses, scientific research on survey methodology, and my own experiences and familiarity with census and survey practices and standards. As I understand it, at this stage of the lawsuit, not much discovery has been provided by the government, and given limitations on the availability of other data, this report has been limited to what is available to me at this time. As such, I reserve the right to supplement and revise the opinions made below, particularly based on information that the government may disclose as discovery progresses.

### III. Summary of Opinion

It is my opinion that government funding decisions concerning the 2020 Census have privileged cost-savings over the accuracy and completeness of the Census to such an extent that the 2020 count will disproportionately undercount the Black and other minority population relative to the Non-Hispanic White population. In particular, the Census Bureau has made numerous design changes for the 2020 Census that depart in significant ways from past practice in order to meet arbitrary budget constraints; however, persistent underfunding and budget uncertainty over the decade leading up to 2020 have led to inadequate research and testing of those design changes, resulting in a failure to assess the impact of those changes on the differential undercount of Black and other minority households as compared to Non-Hispanic White individuals,<sup>1</sup> as well as a failure to develop mitigation strategies to ensure an accurate count of population subgroups. And the prevailing evidence indicates that the changes will have a negative impact on the ability of the Census Bureau to count racial and ethnic minorities. Yet, even though the 2020 Census design will undercount racial and ethnic minorities in substantial numbers, the Census Bureau has, at the same time, cut funding to programs necessary to accurately count racial and ethnic minorities: (1) effective outreach and communications efforts; (2) local infrastructure and staffing; and (3) questionnaire assistance centers where households can be counted even when other methods of reaching them fail. Thus, based on the totality of evidence discussed in this report—quantitative and qualitative—it is my opinion that underfunding of the 2020 Census will unreasonably exacerbate the undercount of racial and ethnic minorities compared to Non-Hispanic White individuals. Although it is not possible to precisely quantify the size of the cumulative effect of these cost-driven decisions and deficiencies given limitations on the availability of data and the Census Bureau's own failure to adequately test its new processes, I conservatively estimate the differential undercount of Black individuals is likely to worsen by at least two percentage points compared to what might otherwise be expected.<sup>2</sup>

### IV. Background and Overview

Before turning to my analysis, I provide some relevant background on the decennial census. The U.S. Constitution requires a count of every person living in the United States every ten years for the purpose of reapportioning seats in the U.S. House of Representatives. The decennial census data are also used to redistrict political boundaries within states and to distribute billions of federal funds—\$880 billion was distributed in 2016 based on the 2010 decennial census data.<sup>3</sup> Census data are also the primary source of information about the nation's population. They inform business decisionmaking and community planning about schools, libraries, and health services.

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<sup>1</sup> Throughout the report I use the term Non-Hispanic White individuals or populations and White individuals or populations interchangeably.

<sup>2</sup> As I discuss, the Census Bureau has often failed to collect sufficient data or conduct the necessary analysis to more directly estimate the link between underfunding and undercounts. Each of the various design changes described in this report privilege cost and budgetary considerations at the expense of quality, and each of them is likely to have a disproportionate impact on minority households.

<sup>3</sup> Andrew Reamer, *Fifty-Five Large Federal Census-Guided Spending Programs: Distribution by State*, GW Institute of Public Policy (May 2019), <https://gwipp.gwu.edu/sites/g/files/zaxdzs2181/f/downloads/Counting%20Dollars%20Brief%20%235%20May%202019.pdf>.

Finally, census numbers are the basis against which almost all national population surveys are benchmarked and adjusted.

## **A. Overview of Census Process**

Broadly speaking, the census process falls into three key steps: (1) the pre-enumeration stage, in which the Census Bureau engages in planning and research about enumeration procedures; (2) the actual enumeration of all living persons in the United States on April 1 in years ending in zero; and (3) a period afterwards in which the Census Bureau evaluates the accuracy and completeness of the data collected.

### **1. Pre-Enumeration**

Because of the size and scope of the undertaking required to enumerate the entire U.S. population, the Census Bureau engages in years of preparation and planning. Those years of testing and preparation play a critical role in the accuracy and fairness of the decennial count. Some of the aspects of this pre-enumeration process include:

- Development of a research plan. One of the first steps in census planning is an assessment of the lessons learned from the previous census and the development of a research and testing program necessary to make major design decisions.
- Engagement with stakeholders. Throughout the planning and research stage, the Census Bureau works closely with stakeholders to gather input on potential design decisions. For example, the National Advisory Committee and Scientific Advisory Committee offer feedback and advice on planned operations and outreach activities. The Census Bureau also conducts public opinion polling to evaluate the public's attitudes of relevance to census participation.
- Census field testing. The census requires a number of operational decisions and processes that are researched and planned through field tests over the course of the decade. Tests early in the decade are aimed at answering research questions needed to make decisions about the operational design. The focus then shifts to refining and validating. The "End-to-End Census Test" conducted two years before the decennial is the culmination of that research and is designed to test and validate operations, procedures, systems and infrastructure.

### **2. The Enumeration Process**

Since 1970, the U.S. Census Bureau has conducted an "actual enumeration" of all U.S. households and their demographic characteristics by enlisting the U.S. population in a multi-year, multi-part process that, generally speaking, proceeds in the following steps.

- Master Address File. The process starts with the creation of the Master Address File (MAF), a database containing every known housing unit in the

country. The creation of the MAF is critical to the decennial count because the Census Bureau uses the MAF at all stages of the enumeration process as the basic list of addresses from which to engage with U.S. households.<sup>4</sup> In previous years, the MAF was created through address canvassing—sending field staff to verify every possible household. For the first time in 2020, the bulk of households will be added to the MAF without field verification, relying instead on in-office address verification through sources such as aerial imaging.

- Self-Response. The Census Bureau sends a mailing to every household listed in the MAF that asks households to self-respond to the Census Bureau with information about their household. In prior years, that self-response request asked U.S. households to mail back a questionnaire. For the first time in 2020, the mailing will direct most households to complete the census questionnaire online.<sup>5</sup> Specifically, each household will receive a letter from the Census Bureau with a unique code to complete the census online.
- Non-Response Follow-up. Households in the MAF that do not self-respond will be visited at least once by an in-person enumerator as part of the Non-Response Follow-up (NRFU) operation. In 2010, the enumerator made six visits to the household in an attempt to count the household; after six failed contact attempts, the enumerator would gather household information from a proxy respondent, such as a neighbor, landlord, or postal worker (making three attempted contacts to enumerate via proxy).<sup>6</sup> In 2020, for the first time, the Census Bureau will use records from federal and state government agencies (referred to as administrative records) to enumerate the household after the first enumerator visit is unsuccessful. If the household cannot be enumerated with administrative records, an enumerator will return to the household for at least two more in-person attempts. After three unsuccessful attempts to contact a member of the household in person, the NRFU enumerator will become proxy-eligible.
- Imputation. Finally, if enumeration-by-proxy fails, the Census Bureau will impute the number of household members and their characteristics based on nearby responding households.

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<sup>4</sup> As discussed further below, if a household is not included in the MAF, it would be necessary for a household member to initiate contact with the Census Bureau in order to be counted.

<sup>5</sup> Households in census tracts with limited internet access will receive a paper questionnaire along with a unique ID to complete online. A telephone number will also be provided which allows completion of census over the phone.

<sup>6</sup> U.S. Department of Commerce, Office of the Inspector General, *Census 2010: Final Report to Congress*, OIG-11-030-1 (June 27, 2011), <https://www.oig.doc.gov/OIGPublications/OIG-11-030-I.pdf>.



### 3. Post-Enumeration Coverage Assessment

After the enumeration is complete, the Census Bureau conducts an independent coverage assessment to evaluate the accuracy of the census count, including estimates of the differential undercount of subgroups of the population.

The coverage assessment relies on two different approaches to determine omissions (*i.e.*, people who *should* have been counted, but were not) and erroneous enumerations (people who *should not* have been counted, but were, including duplications):<sup>7</sup> (1) an independent Post-Enumeration Survey (PES) of a sample of census blocks; and (2) a Demographic Analysis (DA) that compares census results to independent estimates of the population using administrative records, including birth, death, and immigration records, estimates of undocumented immigration, and Medicare data. This independent coverage assessment has consistently found that some segments of the population, including racial and ethnic minorities, are systematically undercounted, although the undercount for these groups has generally improved in recent censuses.

#### B. Historical Differential Undercount

The Census mission is to “count everyone once, only once, and in the right place.” That is, the goal is to produce an accurate *total* population count as well as a complete and fair one; a count that is also accurate for population subgroups.<sup>8</sup> Yet, post-enumeration coverage assessments have historically found a disproportionate undercount of some population subgroups, including racial and ethnic minorities. Given the geographic distribution of these groups, this undercount can have implications for the allocation of political representation and government funding.

##### 1. Impact of a Differential Undercount of Hard to Count Populations on the Geographic Distribution of Federal Domestic Assistance and Other Programs

The differential undercount of Black populations and other hard-to-count (HTC) communities will have a tangible fiscal impact on the geographic distribution of federal domestic assistance. In addition to potentially losing political representation in Congress, the differential undercount could affect the slice of the pie that certain communities receive of federal programs like Medicaid, Title I Grants to Local Educational Agencies,<sup>9</sup> and food grants like the Supplemental Nutrition Program for Women, Infants, and Children (WIC).<sup>10</sup> Medicaid traditionally relies on the Federal Medical Assistance Percentage (FMAP) reimbursement formula

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<sup>7</sup> The general term *coverage error* refers to any error that results from (1) the failure to include all eligible persons or housing units, or (2) the inclusion of some persons or housing units erroneously. Examples of coverage errors include omissions and duplications.

<sup>8</sup> In the language of the Census Bureau Quality Standards, the decennial count needs to be “objective”—accurate, as well as unbiased or complete. U.S. Census Bureau Statistical Quality Standards (July 2013).

<sup>9</sup> Congressional Research Service, R45141, *Analysis of the Elementary and Secondary Education Act Title I-A Allocation Formulas: Factors, Design Elements, and Allocation Patterns* 4 (Mar. 2018), <https://crsreports.congress.gov/product/pdf/R/R45141>.

<sup>10</sup> Congressional Research Service, R44115, *A Primer on WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children* (Apr. 2017), <https://crsreports.congress.gov/product/pdf/R/R44115>.

to calculate disbursement, while Title I and WIC food grants rely on state share of a U.S. population total (Title I—children ages 5-17 in poverty; WIC—infants and children ages 1-4 at or below 185% of poverty). For each of the three programs, the allocation of funds to each state is a function of that state's demographic characteristics relative to the nation as a whole, as determined by the census.

The impact of the undercount of HTC groups varies greatly across states, reflecting the relative proportion of these groups in the respective state populations. A differential undercount of Black individuals, for example, would certainly cause states with a high proportion of Black individuals to lose federal funds under these three funding programs and many others. Furthermore, this could impact Prince George County, as it has a large Hispanic population. Thus, if a differential undercount occurs in the 2020 Census and if current allocation formulas and funding levels remain similar over time, such a differential undercount would cause many of these same states to lose money from the same programs at the same order of magnitude.

## 2. The Differential Undercount

Critically, even if the overall accuracy of the census is high, there can still be subpopulations that are undercounted. This can happen, as it did in 2010, when some segments of the population are *undercounted* at the same time other segments of the population are *overcounted*. For instance, the Census Bureau's assessments of the 2010 census found that Non-Hispanic White individuals had a net overcount, while Black individuals had a net undercount. The difference between population groups is called the *differential undercount*. Figure 1 reports the Census Bureau's estimates of the net undercount and the differential undercount of Black individuals and Hispanic individuals (compared to non-Hispanic White individuals) in the last three censuses from the independent post-enumeration survey that is conducted for the coverage assessment.<sup>11</sup>

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<sup>11</sup> There is variation in whether an undercount is represented as a negative or positive number. In this table, a negative number represents an *overcount*. It's also worth noting that the undercount of some subgroups of racial and ethnic minorities is even worse. For example, the net undercount rate for Black males age 30-49 in 2010 was 10%, with an omissions rate of 16.7%. And the net undercount is also worse for young minority children—6.3% for Black children age 0-4 and 7.5% for Hispanic children age 0-4. See William P. O'Hare, *Differential Undercounts in the U.S. Census Who is Missed*, 53 (2019).

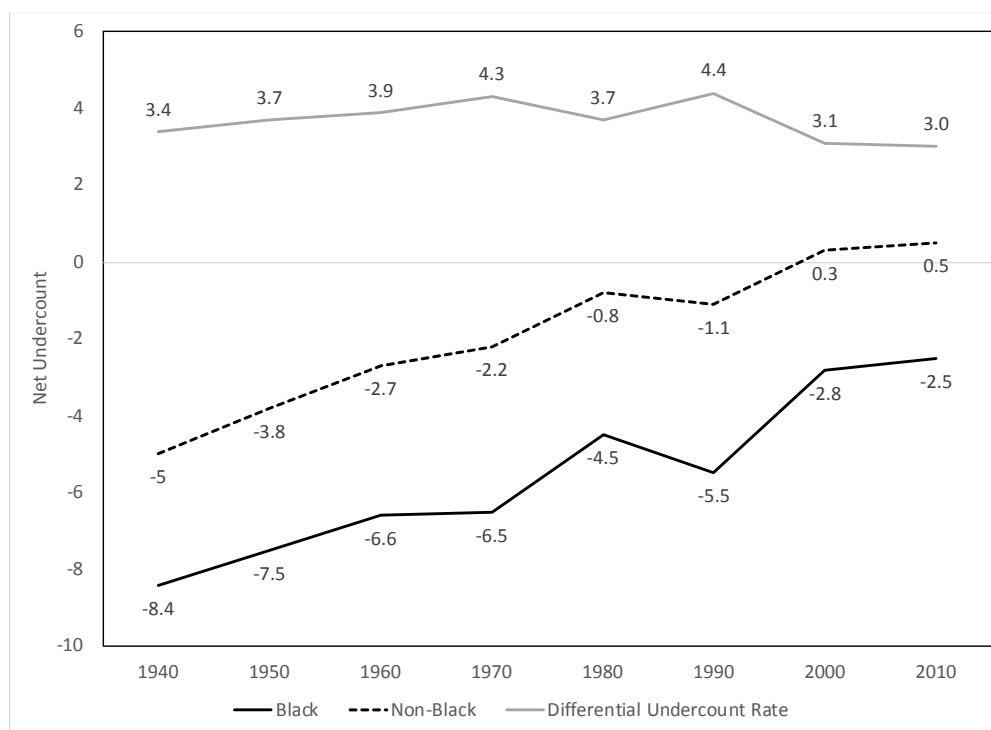
**Figure 1: Recent Net and Differential Census Undercounts from Post-Enumeration Surveys**

<b>Race/Origin Domain</b>	<b>2010</b>	<b>2000</b>	<b>1990</b>
U.S. Total	-0.01%	-0.49%	1.61%
Non-Hispanic White	-0.84%	-1.13%	0.68%
Black	2.06%	1.84%	4.57%
Hispanic	1.54%	0.71%	4.99%
<b>Black Differential Undercount</b>	<b>2.90%</b>	<b>2.97%</b>	<b>3.89%</b>
<b>Hispanic Differential Undercount</b>	<b>2.38%</b>	<b>1.84%</b>	<b>4.31%</b>

Note: As reported in Table 7, DSSD 2010 Census Coverage Measurement Memorandum Series #2010-G-01.

Figure 2 graphs the differential undercount of the Black population compared to Non-Black populations since 1940 based on the Census Bureau's Demographic Analysis (DA). Compared to post-enumeration surveys, DA allows for fewer subgroup estimates because of limitations in the administrative records. Nonetheless, the data provide a consistent story regarding the differential undercount of racial and ethnic minorities. As seen in Figure 2, the net undercount of Black populations has decreased over time, but the differential undercount between Black populations and Non-Black populations has improved little since 1940.<sup>12</sup>

<sup>12</sup> It is thought that the decreasing proportion of White individuals in the Non-Black category masks the extent of the differential undercount. *See id.* at 30.

**Figure 2: Undercount of Black populations from Demographic Analysis**

Note: Census data as reported in Figure 8.2 of O'Hare (2019). In this figure, the net undercount is represented with a negative number.

### 3. Self-Response Rate and the Undercount

Given the cost and complexity of estimating undercounts from post-enumeration surveys and demographic analyses, researchers inside and outside the Census Bureau use self-response rates (historically, mail return rates) as a proxy for the risk of being missed in the census.<sup>13</sup> NRFU operations have not previously and will not in 2010 fully mitigate a differential self-response rate for several reasons. It is well-documented that data collected through NRFU operations are less accurate and more costly than that collected through self-response.<sup>14</sup> All of the factors that affect the willingness of a household to self-respond also impact their willingness to respond and to respond honestly to a census enumerator.<sup>15</sup> NRFU operations also do not correct for deliberate omissions of household members—when a household responds but leaves individual members of

<sup>13</sup> There are many reasons for this. Self-response rates are often available even when a complete coverage assessment has not been conducted. The coverage assessments that produce the estimates of the differential undercount outlined above are not finalized until years after the decennial count. Given their independent structure, they are also not able to be directly linked to any particular operational decision or feature. Finally, as discussed below, many of the census tests conducted during the decade did not have coverage assessments.

<sup>14</sup> J. Brown et. al., *Working Paper: Understanding the Quality of Alternative Citizenship Data Sources for the 2020 Census*, Center for Economic Studies, U.S. Census Bureau, 18–38 (2018), <https://www2.census.gov/ces/wp/2018/CES-WP-18-38.pdf>.

<sup>15</sup> *Id.*

the household off their questionnaire.<sup>16</sup> The use of proxy respondents will not correct for a differential self-response because proxies are more likely to systematically undercount those living in large, crowded, and complex households—disproportionately racial and ethnic minorities.<sup>17</sup> Likewise, the imputation procedure used by the Census Bureau will fail to mitigate a differential self-response rate because it estimates the household size of uncounted households based on households who responded, which will underrepresent minority households.<sup>18</sup> All of these issues are recognized by the Census Bureau.<sup>19</sup>

Finally, the available evidence shows a statistical relationship between self-response rates and undercounts.<sup>20</sup> Aggregate analyses, for example, show that census tracts with lower mail return rates have higher net undercounts.<sup>21</sup> Indeed, the Census Bureau labels some census tracts as Hard-To-Count (HTC) based on the mail return rate—these tracts tend to be disproportionately communities of color and rural areas. The Census Bureau acknowledges that NRFU is less successful among the HTC populations and past censuses consistently show that groups with a lower self-response rate also have a higher differential undercount.<sup>22</sup> Figure 3 reports the self-

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<sup>16</sup> Rodney L. Terry, et. al., *Exploring Inconsistent Counts of Racial/Ethnic Minorities in a 2010 Census Ethnographic Evaluation*, Bulletin of Sociological Methodology 135, no. 1: 32–49, 42 (2017); see also Roger Tourangeau et. al., *Who Lives Here? Survey Undercoverage and Household Roster Questions*, Journal of Official Statistics 13, no. 1 (1997).

<sup>17</sup> Proxies can be unwilling (in the case of a landlord not wanting to accurately report the number of residents if it exceeds occupancy laws) or unable (in the case of a postal worker unknowledgeable about all household members). Terry et. al., *supra* n. 14. Tourangeau et. al., *supra* n. 14; Elizabeth Martin, *Strength of Attachment: Survey Coverage of People with Tenuous Ties to Residences*, Demography 44, no. 2: 427. (2007). Nonrelatives (e.g., boarders or roommates) were more likely than relatives of the respondents to be left off a census or survey roster. Robert Fay, *An Analysis of Within-Household Undercoverage in the Current Population Survey*, Annual Research Conference (1989); Edward Kissam, *Differential Undercount of Mexican Immigrant Families in the US Census*, Statistical Journal of the IAOS 33, no. 3 797–816 (2017); M. de La Puente, *An Analysis of the Underenumeration of Hispanics: Evidence From Small Area Ethnographic Studies*, Annual Research Conference Proceedings. Bureau of the Census, 45–69 (1992).

<sup>18</sup> David Fein, *Racial and Ethnic Differences in U.S. Census Omission Rates*, Demography 27:285-302 (1990); Arnold Jackson, *2010 Census Mail Response/Return Rates Assessment Report*, 2010 Census Planning Memoranda Series, No. 198 (2012).

<sup>19</sup> See e.g., Brown et. al., *supra* n.12; James Farber, Deborah Wagner, and Dean Resnick, *Using Administrative Records for Imputation in the Decennial Census*, Proceedings of the Survey Research Methods Section, American Statistical Association, (2005), <https://www2.amstat.org/sections/srms/Proceedings/y2005/Files/JSM2005-000278.pdf>; As documented at *State Of New York et. al. v. United States Department Of Commerce*, et al., Case 1:18-cv-02921-JMF, 121–125.

<sup>20</sup> For review, see Eugene P. Ericksen, *Errors in the Census*, in Margo J. Anderson et al., (Eds.), *Encyclopedia of the U.S. Census* (Second Edition) Sage/CQ Press (2012). For example, analyses of the 1990 Census find a correlation between the mail non-return rate and the net undercount of .41 and between the mail non-return rate and omissions of .71. *Id.*

<sup>21</sup> As well as higher omissions and erroneous enumerations. National Research Council, *The 2000 Census: Interim Assessment. Panel to Review the 2000 Census* (2001); Ericksen and DeFonso, *Beyond the Net Undercount: How to Measure Census Error* (1993).

<sup>22</sup> U.S. Census Bureau, 2010 Census Planning Memoranda Series, No. 198, *2010 Census Mail Response/Return Rates Assessment Reports* (2012); Thomas Mule, U.S. Census Bureau, *Census Coverage*

response rates and omission rates by race and ethnicity in 2010—again, there is a strong statistical relationship between self-response rates and the undercount measure.<sup>23</sup>

**Figure 3: Self-Response and Omission Rates in 2010 Census**

Race/Origin	Mail Return Rate	Omission Rate
Non-Hispanic White	82.5	4.3
Black	70.0	9.3
American Indian/Native Alaskan	69.8	7.6
Asian	75.4	5.3
Pacific Islander	59.7	7.9
Hispanic	69.7	7.7
<b>Correlation</b>		<b>-0.756</b>

Note: Census data as reported in Table 15.1 of O’Hare (2019).

In sum, all available evidence points to the fact that a differential self-response will create a differential undercount. In *Kravitz v. United States Dep’t of Commerce*, the court found that “demographic groups with lower self-response rates are more likely to be undercounted. This straight line between lower participation prior to NRFU and an ultimate net undercount is supported by common sense and a preponderance of the evidence.”<sup>24</sup> As summarized in the *Kravitz v. United States Dept of Commerce* decision, the data patterns suggest that a ten-percentage point drop in self-response is associated with an approximate two-percentage point increase in the undercount.<sup>25</sup>

Thus, I will sometimes focus on the likely effects of underfunding and design decisions on the anticipated self-response rate to the 2020 Census. To the extent these decisions create a differential self-response rate, it will lead to a higher differential undercount.

## V. The 2020 Census and the Undercount

I next review the context in which the 2020 Census was planned and will be conducted. This overview shows that it has been generally understood, including at the Census Bureau, that the self-response of racial and ethnic minorities was likely to worsen relative to 2010, *even in the absence of underfunding*. Notwithstanding that awareness, congressionally-imposed cost

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*Measurement Estimation Report: Summary of Estimates of Coverage for Persons in the United States*, (2012).

<sup>23</sup> See also The National Research Council’s (NRC) Panel to Review the 2000 Census. The reported  $-.756$  is the correlation coefficient, which ranges from 0 (no relationship) to 1 (a one-to-one relationship). The observed correlation indicates that groups with a higher mail return rate are less likely to be omitted from the census.

<sup>24</sup> 366 F. Supp. 3d 681, 716 (D. Md. 2019).

<sup>25</sup> See *id.* This pattern is seen in 1990 (Erickson and DeFonso 1993) and in 2010, when a 13-percentage point difference in mail return rate for Hispanics compared to White individuals resulted in a differential undercount rate of 2.38% and a 13-percentage point difference in mail return rate for Black individuals compared resulted in a net undercount rate of 2.90%.



constraints led the Census Bureau to prioritize cost over completeness in the design of the 2020 census and to conduct inadequate research and testing to understand and address the impact of design changes on the count racial and ethnic minorities.

## **A. 2020 Census Challenges**

Since the very beginning stages of planning for the 2020 count, the Census Bureau has acknowledged that it would be more challenging to conduct an accurate and complete census compared to 2010.<sup>26</sup> Given the following factors, there was a clear need for increased funding to do the necessary research, testing, outreach, and communication necessary to accurately count racial and ethnic minorities.

### **1. Population Trends**

The U.S. population is increasingly diverse—geographically, culturally, and linguistically—and households are more complex than ever before. As such, a greater share of the population will fall into “hard to count” categories in 2020 compared to 2010. This means it will take more effort and funding to achieve the same level of accuracy as in 2010. A recent estimation by the Urban Institute concluded that *even if the 2020 Census performs exactly as the 2010 Census*, the differential undercount of racial and ethnic minorities will worsen simply based on changes in the composition of the population; they estimate that Black individuals will be undercounted by 2.43% (with a differential undercount of 3.17%) and Hispanic individuals being undercounted by 2.01% (with differential undercount of 2.75%).<sup>27</sup>

### **2. Attitudinal Trends**

The public is less trusting of government, less willing to share personal information, and has decreased confidence in the security and confidentiality of government data collections.

There is extensive evidence showing that this distrust in government is more pronounced among racial and ethnic minorities and will thus result in a larger differential self-response rate between White individuals and Non-White individuals in 2020. First, within the attitudinal data, we see that trust in government is at an all-time low under the current administration and is lower among Black individuals than White individuals.<sup>28</sup>

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<sup>26</sup> For example, a 2010 report on lessons learned from the 2010 decennial for the 2020 count, the GAO observes that “a complete and accurate census is becoming an increasingly daunting task, in part because of the national’s population is growing larger, more diverse, and more reluctant to participate in the enumeration.” U.S. Government Accountability Office, *Key Efforts to Include Hard-to-Count Populations Went Generally as Planned; Improvements Could Make the Efforts More Effective for Next Census*, GAO-11-45 (December 14, 2010), <https://www.gao.gov/products/GAO-11-45>.

<sup>27</sup> Diana Elliott et. al., *Assessing Miscounts in the 2020 Census*, Urban Institute (2019), [https://www.urban.org/sites/default/files/publication/100324/assessing\\_miscounts\\_in\\_the\\_2020\\_census.pdf](https://www.urban.org/sites/default/files/publication/100324/assessing_miscounts_in_the_2020_census.pdf). This is the projected undercount based on their low-risk scenario.

<sup>28</sup> *Public Trust in Government: 1958-2019*, Pew Research Center - U.S. Politics and Policy (April 11, 2019), <https://www.people-press.org/2019/04/11/public-trust-in-government-1958-2019/>.

Attitudes about privacy and confidentiality, which the Census Bureau recognizes as a strong predictor of census self-response, show similar gaps.<sup>29</sup> In the 2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) national survey, the Census Bureau found that Non-White individuals are more concerned than White individuals about the confidentiality of the Census. When asked about concern that the Census Bureau will not keep their answers to the census confidential: 38% of Black respondents were “very” or “extremely” concerned (as are 35% of Hispanic respondents), compared to 24% of White respondents. Non-White respondents were also more likely to be “extremely” or “very concerned” that the 2020 Census would be used against them: 35% of Black respondents and 32% of Hispanic respondents, compared to 16% of White respondents.<sup>30</sup> CBAMS may even underestimate the extent of such concerns because of likely nonresponse bias—those individuals who failed to respond the CBAM survey invitations are likely less willing to complete the census than respondents. An analysis of the 1990 Census found that those most concerned about confidentiality had a mail return rate 22 percentage points lower than those least concerned; an analysis of the 2000 census found that those most concerned about confidentiality had a mail return rate 12.5 percentage points lower than those most concerned.

Confidentiality concerns have an impact not only on whether a household responds, but also if they respond truthfully—including the number of household members. Experimental and ethnographic research have found deliberate underreporting of household members based on “concerns about confidentiality, deportation, and their general trust in government.”<sup>31</sup> In a specific discussion of NRFU field operations among Hispanic households, for instance, researchers explained that “some proxy respondents resisted the interview by providing data that seemed inaccurate or incomplete just to comply with the interview.”<sup>32</sup> This research suggests that racial and ethnic minorities might systematically underreport household size to enumerators if confidentiality concerns are not addressed. The Census Bureau has no protocol to enumerate omitted household members when a proxy enumerates a household but omits one or more household members.<sup>33</sup>

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<sup>29</sup> For example, the Census Bureau acknowledges this in the 2020 Operational Plan: “The accuracy and usefulness of the data collected for the 2020 Census are dependent upon the ability to obtain information from the public, which is influenced partly by the public’s perception of how well their privacy and confidentiality concerns are being addressed. . . . If a substantial segment of the public is not convinced that the Census Bureau can safeguard their response data against data breaches and unauthorized use, then response rates may be lower than projected, leading to an increase in cases for follow-up and cost increases.” For review of research on this topic, *see* U.S. Census Bureau, Privacy Research in Census 2000, Census 2000 Topic Report No. 1 (2003).

<sup>30</sup> Kiley McGeeney, et al., *2020 Census Barriers, Attitudes, and Motivators Study Survey Report A New Design for the 21st Century*, version 2.0. (January 24, 2019), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/final-analysis-reports/2020-report-cbams-study-survey.pdf>.

<sup>31</sup> Terry et. al., *supra* n.14 at 42; Tourangeau et. al., *supra* n.14.

<sup>32</sup> Terry et. al., *supra* n.14 at 42.

<sup>33</sup> Robert E. Fay et al., *Lower Mail Response in the 1990 Census: A Preliminary Interpretation*, In *Proceedings of the Annual Research Conference*, 3–32 (1991), <https://www.census.gov/library/working-papers/2010/adrm/rsm2010-13.html>; Eleanor Singer, et al., *Attitudes and Behavior: The Impact of Privacy and Confidentiality Concerns on Participation in the 2000 Census*, *Public Opinion Quarterly*, 67(3), 368–384 (2003).



### 3. Citizenship Question Controversy

Finally, it is my opinion that the widely-publicized proposal to add a citizenship question to the census form will also increase the gap in self-response between White and Non-White individuals. On March 26, 2018, Department of Commerce Secretary Wilbur Ross directed the Census Bureau to add a citizenship question to be asked of all households. This decision was made against the recommendations of the Census Bureau, which provided compelling evidence that the question would lower self-response rates, increase costs, and reduce the accuracy of census data.<sup>34</sup> Although it appears litigation has been successful in preventing the addition of a citizenship question to the 2020 questionnaire, damage has already been done to the quality of the 2020 Census. The proposed addition of the citizenship question has politicized the 2020 Census, distracted staff, diverted resources, and fueled distrust. The revelations that the current administration used a “contrived” rationale for adding the citizenship questions and circumvented the standard process for adding a question contributes to negative attitudes that undermine the public’s willingness to respond.<sup>35</sup> At a recent National Advisory Committee meeting, it was reported that businesses are now reluctant to promote the census because it has become politicized.<sup>36</sup> A report of the National Latino Commission on Census 2020 similarly observed “even if the federal government now removes the citizenship question, it has impaired the Census. It has intensified suspicion of a project that requires trust and that lies at the foundation of our democracy.”<sup>37</sup>

The Census Bureau offered a “conservative” estimate that the addition of a citizenship question would cause a 5.8 percentage point decline in self-response among households that include a non-citizen, subsequently updated to a 8 percentage point decline in self-response among 28.1% of U.S. Households.<sup>38</sup> This translates into 2,832,480 additional households being sent to NRFU.<sup>39</sup> The negative effect of the controversy surrounding the citizenship question extends beyond noncitizen households, also depressing cooperation among citizen households, especially racial and ethnic minorities. It is well-documented that Hispanic citizen households are likely to

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<sup>34</sup> *Kravitz*, 355 F. Supp. 3d. at 716; *State Of New York, et al. v. United States Department Of Commerce, et al.*, Case 1:18-cv-02921-JMF.

<sup>35</sup> Sarah Evans, et al., *2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) Focus Group Final Report (2019)*, U.S. Census Bureau (January 24, 2019) reported that some CBAMS focus group participants said the purpose of the citizenship question is to find undocumented immigrants. One said, “[The question is used] to make people panic. Some people will panic because they are afraid that they might be deported. *Id.* at 59.

<sup>36</sup> *Companies That Rely On Census Data Worry Citizenship Question Will Hurt*, NPR (May 19, 2019) <https://www.npr.org/templates/transcript/transcript.php?storyId=722176779>.

<sup>37</sup> *The Community Speaks: A Report of the National Latino Commission on the Census 2020*, Naleo Educational Fund, 14 (May 2019).

<sup>38</sup> The analysis has now been peer-reviewed. Brown et. al., *Predicting the Effect of Adding a Citizenship Question to the 2020 Census Demography*, (forthcoming).

<sup>39</sup> This estimate relies on the assumptions from the Brown et. al. article that the 2020 Census will count 320 million persons in 126 million households. *Id.* at 42. It is estimated that 76% of the nation’s undocumented immigrant population are Hispanic. Jeffrey S. Passel and D’Vera Cohn, *U.S. Unauthorized Immigrant Total Dips to Lowest Level in a Decade*, Pew Research Center (November 27, 2018), [https://www.pewhispanic.org/wp-content/uploads/sites/5/2019/03/Pew-Research-Center\\_2018-11-27\\_U-S-Unauthorized-Immigrants-Total-Dips\\_Updated-2019-06-25.pdf](https://www.pewhispanic.org/wp-content/uploads/sites/5/2019/03/Pew-Research-Center_2018-11-27_U-S-Unauthorized-Immigrants-Total-Dips_Updated-2019-06-25.pdf).

experience spill-over effects.<sup>40</sup> A survey experiment that randomized if respondents were told that a citizenship question would be included on the census form found an eleven-point drop in the percentage of foreign-born respondents who said they would complete the census, a six-point drop among Latinos, and a two point drop for the overall sample.<sup>41</sup> Another RCT found that including a citizenship question reduced the count of the Hispanic population by twelve percentage points, and also had significant negative impacts on non-Hispanic individuals.<sup>42</sup> While these analyses focused on calculating the impact of the questionnaire content, survey methodologists recognize that the decision to cooperate also depends on the sociopolitical climate.<sup>43</sup> To the extent the census is viewed as political because of the broader citizenship question controversy and rhetoric, it can have consequences for the willingness of individuals to respond and to respond completely and honestly *even if the question is ultimately removed from the questionnaire*.<sup>44</sup> Indeed, census researchers have acknowledged the possibility that citizen households could boycott the census as a result of the controversy surrounding the citizenship question.<sup>45</sup> Moreover, given the administration's inconsistent and fluctuating response to the U.S. Supreme Court decision, it seems very likely that households might not be aware that a citizenship question *will not* be on the 2020 questionnaire. In 2010, the census form did not include a citizenship question, yet 21 percent of the public thought that the census could be used to determine if someone was in the country legally according to public opinion polls.<sup>46</sup>

## B. 2020 Cost Constraints

Despite recognition of increased challenges for conducting a complete and accurate count in 2020, and its likely impact on counting minority communities, the Census Bureau has made decisions based on cost savings rather than to improve the accuracy of the census count. As summarized by statisticians Bruce Spencer and Zachary Seeskin: “For at least the last five censuses, high accuracy was sought and spending was adjusted to try to attain it. . . . By contrast,

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<sup>40</sup> For an example of spill-over effects on Hispanics *see* Marcella Alsan and Crystal Yang, *Fear And The Safety Net: Evidence From Secure Communities*, National Bureau of Economic Research (June 2018, revised March 2019).

<sup>41</sup> Matt Barreto et al, *New Research Shows Just How Badly a Citizenship Question Would Hurt the 2020 Census*, The Washington Post (April 22, 2019), [https://www.washingtonpost.com/politics/2019/04/22/new-research-shows-just-how-badly-citizenship-question-would-hurt-census/?utm\\_term=.3e5affc49b66](https://www.washingtonpost.com/politics/2019/04/22/new-research-shows-just-how-badly-citizenship-question-would-hurt-census/?utm_term=.3e5affc49b66). This report also references the results of a survey experiment that found a significant decline in self-reported willingness to respond to the census: a drop of 7 to 10 percent nationally, 11 to 18 percent of immigrants, and 14 to 17 percent of Latinos. *Id.*

<sup>42</sup> Matthew Baum, Bryce Dietrich, Rebecca Goldstein, and Maya Sen, *Estimating the Effect of Asking About Citizenship on the US Census: Results from a Randomized Controlled Trial*, Harvard University (2019).

<sup>43</sup> Robert Groves et al., *Survey Methodology* (2nd). Hoboken: John Wiley and Sons (2009); D. Sunshine Hillygus, et. al., *Hard Count: The Political and Social Challenges of Census Mobilization*, Russell Sage Foundation (2006).

<sup>44</sup> Hillygus, et. al., *supra* n. 43.

<sup>45</sup> Brown et al., *supra* n. 37.

<sup>46</sup> Pew Hispanic Center, *Latinos and the 2020 Census* (April 1, 2010), <https://www.pewresearch.org/wp-content/uploads/sites/5/reports/121.pdf>. Analysis of the data finds that Black respondents (28%) were more likely than White respondents (20%) to say this is the case.

for the 2020 census, Congress adopted a cost target instead of an accuracy target, and the Census Bureau is held responsible to achieve acceptable accuracy at that cost.”<sup>47</sup>

The decision to prioritize cost savings is well documented. In 2011, Congress instructed the Bureau to spend no more on the 2020 Census than was spent on the 2010 Census, not adjusting for inflation.<sup>48</sup> From a 2012 Senate Committee Report on the 2013 Appropriations Bill: “Controlling costs for the 2020 decennial census remains a top oversight concern for the Committee . . . . The Bureau is directed to continue to bring down the cost of the 2020 decennial census at a level less than the 2010 census and to further consider spending less than the 2000 census, not adjusting for inflation.”<sup>49</sup> This directive was reiterated in committee reports in subsequent years.<sup>50</sup> In 2015, Census Bureau Director John H. Thompson acknowledged these cost constraints in testimony before Congress: “as we began this decade, the Census Bureau, with the guidance of Congress, established an important goal to design and conduct the 2020 Census in a manner that costs less per housing unit than the 2010 Census and to maintain quality.”<sup>51</sup>

Especially striking has been the failure to ramp-up spending in the three years preceding the decennial count, when the Bureau is finalizing testing, beginning publicity, and starting to hire. Given these heightened preparations, the Bureau has historically received steep budget increases. The budget increased 65% from 1987 to 1988, 101% from 1997 to 1998, and 61% from 2007 and 2008.<sup>52</sup> In contrast, the current administration proposed an almost flat budget request from FY2017 to FY2018. According to The Census Project, a broad-based coalition of national, state, and local organizations, the “historically low” FY2018 budget request by the current administration “means the chances of a dramatic undercount of the population in the 2020 Census will increase, especially the so-called ‘‘differential undercount’’ of communities of color and rural residents.”<sup>53</sup> Congress ultimately appropriated more to the Census Bureau than in FY2018 and FY2019, but damage had already been done to time-sensitive research and testing.

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<sup>47</sup> Z.H. Seeskin, B.D. Spencer, *Working Paper: Balancing 2020 Census Cost and Accuracy: Consequences for Congressional Apportionment and Fund Allocations*, Northwestern University, Institute for Policy Research (2018).

<sup>48</sup> Departments Of Commerce And Justice, And Science, And Related Agencies Appropriations Bill (September 15, 2011), <https://www.congress.gov/congressional-report/112th-congress/senate-report/78/1?q=%7B%22search%22%3A%5B%22decennial+census%22%5D%7D&s=4&r=4>.

<sup>49</sup> *Id.* at 16.

<sup>50</sup> Jennifer Williams, *The Decennial Census: Issues for 2020*, Congressional Research Service, 5 (March 16, 2017), [https://www.everycrsreport.com/files/20170316\\_R44788\\_1ebd2c80ec71e3420dca11d736d1c00b1eb9f04c.pdf](https://www.everycrsreport.com/files/20170316_R44788_1ebd2c80ec71e3420dca11d736d1c00b1eb9f04c.pdf).

<sup>51</sup> Testimony of Census Bureau Director John H. Thompson, in U.S. Congress, Senate Committee on Homeland Security and Governmental Affairs, 2020 Census: Challenges Facing the Bureau for a Modern, Cost-Effective Survey, hearing, 114th Cong., 1st sess., 1 (April 20, 2015), <http://www.hsgac.senate.gov/hearings/2020-census-challenges-facing-the-bureau-for-a-modern-cost-effective-survey>.

<sup>52</sup> Arloc Sherman, *Census Funding in Crisis*, Center on Budget and Policy Priorities (June 28, 2017), <https://www.cbpp.org/blog/census-funding-in-crisis>.

<sup>53</sup> *Undercounting in the 2020 Census*, The Census Project (June 21, 2017), <https://thecensusproject.org/2017/06/21/undercounting-in-the-2020-census/>.

Although the final FY2020 budget has not yet been passed, the current administration's request was again inadequate to ensure a complete and accurate census. Sen. Jerry Moran (R-Kan.), who chairs the Senate Appropriations subcommittee with jurisdiction over Commerce, said at an April 2, 2019 hearing, "the budget this year falls short."<sup>54</sup> In an April 2019 letter to the Senate appropriations committee, 130 organization stakeholders wrote that the current administration budget request "obscures and fails to meet the Census Bureau's true funding needs."<sup>55</sup>

The Census Bureau has also failed to spend critical resources *even when funding has been allocated*. The 2019 House Appropriations Committee report "directs [the] Census to increase outreach activities to historically undercounted communities" and explicitly adds language "providing that funds may be used for . . . promotion, outreach, and marking activities."<sup>56</sup> Yet the current administration's 2020 budget request includes a carry-over of \$1 billion in unspent FY2019 resources to FY2020. In a letter to the House and Senate Appropriations Committee leadership on April 29, a coalition of organizations wrote:<sup>57</sup>

*"We are alarmed that the administration has decided to carry over to FY2020 more than \$1 billion in resources available for 2020 Census activities in FY2019, in order to reduce the direct appropriation it has proposed for next year. In doing so, the administration is short-changing important 2020 Census outreach programs that Congress directed in report language accompanying both the FY2018 and FY2019 Commerce, Justice, Science, and Related Agencies appropriations bills. We believe that the Census Bureau must expand or plan those programs now, in order to deploy them effectively and prudently in support of peak census operations next year."*

### **C. Cost-Driven, Significant Design Changes**

In an effort to meet its cost targets, the 2020 Census was redesigned with major methodological changes, including:

- (1) Reengineering address canvassing so that the Master Address File (MAF) is built remotely rather than sending canvassers to walk every street.
- (2) Internet self-response.

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<sup>54</sup> Jory Heckman, *Trump's Budget Request for 2020 Census 'Falls Short' of Commerce's Previous Targets* (April 3, 2019), <https://federalnewsnetwork.com/budget/2019/04/trumps-budget-request-for-2020-census-falls-short-of-commerces-previous-targets/>.

<sup>55</sup> April 2019 Letter to the Senate Appropriations Committee, The Census Project (April 16, 2019), <https://censusproject.files.wordpress.com/2019/04/fy-2020-census-project-sign-on-letter-pre-cjs-mark-up-4-16-19-2.pdf>.

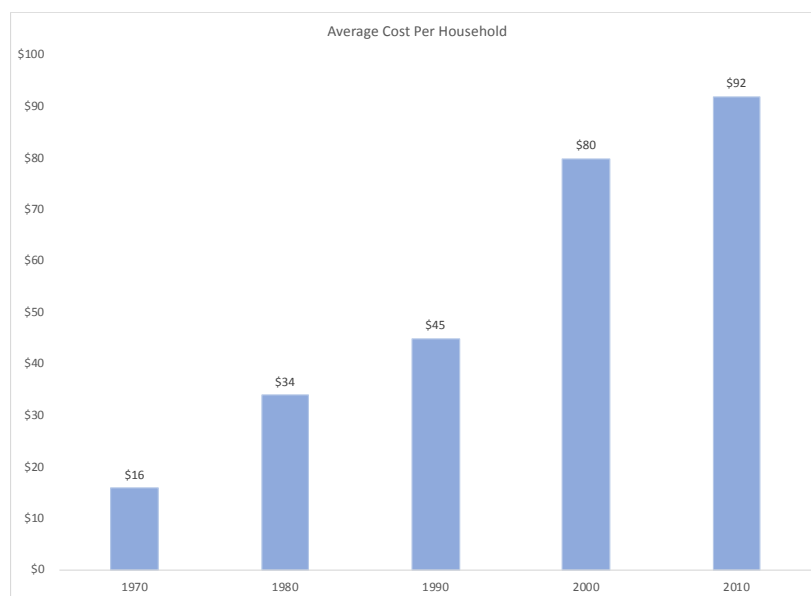
<sup>56</sup> H. Rept. 115-704, Commerce, Justice, Science, And Related Agencies Appropriations Bill (H.R.5952), 2019, 115th Congress (2017-2018) <https://www.congress.gov/congressional-report/115th-congress/house-report/704/1>.

<sup>57</sup> Don't Short Change the 2020 Census The Census Bureau Must Spend Available Resources Now, The Census Project (April 29, 2019), <https://censusproject.files.wordpress.com/2019/04/census-project-and-lcchr-letter-to-senate-re.-fy-19-spending-4-30.pdf>.

- (3) Utilization of administrative records to determine which housing units are vacant and the characteristics of non-responding households.<sup>58</sup>

In 2015, the Census Bureau estimated that the “redesigned” 2020 would cost \$12.5 billion—30% less than the estimated \$17.8 billion cost if the 2010 Census design was used.<sup>59</sup> Given the anticipated challenges of a complete and accurate count in 2020 because of demographic and attitudinal trends, this life-cycle constraint was unrealistic. The cost target also deviated substantially from historical trends in cost, as shown in Figure 4. The U.S. General Accounting Office (GAO) has acknowledged the link between cost and quality: “Over the past several censuses, the Bureau has attempted to address the competing goals of containing costs and improving the quality of census information, but costs continued to rise in part because external factors, such as a growing and increasingly diverse population, required the Bureau to devote more resources in order to ensure a complete count.”<sup>60</sup> The details of these design changes are discussed further below.

**Figure 4: Census Cost Per Household**



Note: Data reported in GAO-17-584T

<sup>58</sup> A fourth design change – reengineering field operations to increase use of technology and reduce staffing and infrastructure – is discussed in the next section.

<sup>59</sup> Testimony of then-Census Bureau Director John H. Thompson, before the House Committee on Government Oversight and Reform, Subcommittee on Government Operations and Subcommittee on Information Technology, Preparing for the 2020 Census: Will the Technology Be Ready?, 114th Cong., 1st Sess., 2 (November 3, 2015), <https://oversight.house.gov/hearing/preparing-for-the-2020-census-will-the-technology-be-ready/>.

<sup>60</sup> U.S. Government Accountability Office, *Additional Actions Could Improve the Census Bureau’s Ability to Control Costs for the 2020 Census*, GAO-12-80, 3 (January 2012).



As the GAO has repeatedly noted, design changes introduce risks and require substantial investment in research and planning.<sup>61</sup> The National Academy of Sciences (NAS) recommended and supported design changes but emphasized that “the matter of implementing them should be guided by research on how each type of change may influence the trade-off between census accuracy and cost.”<sup>62</sup> Yet, for the first seven fiscal years of the decade, Congress allocated less than the Bureau requested, requiring reductions in planned research and testing. Former Director John Thompson has said that the Bureau “has been underfunded by about \$200 million . . . to produce the kind of census that they were planning.”<sup>63</sup>

Each of these design changes are likely to have a serious impact on the ability of the Census Bureau to enumerate HTC populations.

### **1. Master Address File (MAF)**

Among the redesigns of the 2020 Census with implications for the potential undercount of racial and ethnic minorities is the Census Bureau’s new method for creating the MAF—the address and physical location of each place in the country where someone is (or could be) living. In prior years this list was created through an extensive field operation in which thousands of temporary works conducted address canvassing to document every possible household. For the first time in 2020, the Census Bureau is reducing the amount of in-field address canvassing that must be completed by field staff by using “in-office” address canvassing. That is, the Census Bureau determines the physical location of housing units through use of aerial imagery and administrative records, rather than canvassing by field staff.

An accurate address list is the cornerstone of a successful census. Only addresses in the MAF will receive the mailed communications from the Census Bureau or will receive an in-person visit as part of the NRFU operation. Mailed communications remain important for the 2020 Census as households will receive a mailing directing them to the appropriate link at which to complete the online form.<sup>64</sup>

Critically, inaccuracies in MAF are likely to exacerbate the differential undercount because racial and ethnic minorities are more likely to be missed. Recent research concludes that one reason for an undercount of racial and ethnic minorities is that they live in unusual or concealed housing units that are not in the MAF.<sup>65</sup> Data from the Bureau and external researchers finds that the MAF is more likely to miss those living in complex housing situations, disproportionately racial and

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<sup>61</sup> U.S. Government Accountability Office, *2020 Census: Sustained Attention to Innovations, IT Systems, and Cost Estimation Is Needed*, GAO-17-584T, (May 3, 2017), <https://www.gao.gov/products/GAO-17-584T>.

<sup>62</sup> National Research Council, *Change and the 2020 Census: Not Whether but How*, National Academies Press (2011).

<sup>63</sup> Chase Gunter, *Thompson Dishes on Census Concerns, Needs for Catch-Up*, FCW (April 3, 2019), <https://fcw.com/articles/2017/07/26/census-gunter.aspx>.

<sup>64</sup> 2015 Census Test: Advertising and Partnerships Savannah DMA National Advisory Committee Monica Vines, Researcher (October 8, 2015).

<sup>65</sup> Edward Kissam, *Differential Undercount of Mexican Immigrant Families in the US Census*, Statistical Journal of the IAOS, 33(3), 797-816 (2017). Community-based Address Canvassing pilots have identified significant additional housing units.

ethnic minorities.<sup>66</sup> Large ethnographic studies in a number of different localities confirm “irregular housing,” such as informal conversions from single family to multi-family arrangements are one reason for undercounts.<sup>67</sup> More recent research finds a record number of households living in multigenerational households.<sup>68</sup>

Funding decisions have jeopardized the cost and quality of MAF. Because of cancelled testing, the Census Bureau has reduced the estimated percent of households to be correctly canvassed in office, significantly increasing anticipated costs and creating significant uncertainty about total costs.<sup>69</sup> A 2017 OIG investigation found significant issues with MAF, concluding that the Census Bureau did not meet its test objectives because of “schedule delays which affected test preparedness.” Nearly half of test activities had a delayed start or finish date, with cumulative consequences: “Each activity is linked to preceding and succeeding activities, so a delay to one activity may cause many other activities to be delayed and jeopardizes the Bureau’s ability to effectively plan and carryout testing activities in a timely manner.”<sup>70</sup> Budget cuts also resulted in planned software functionality not being developed.<sup>71</sup> Despite early plans to canvass no more than 25% of addresses, the most recent operational plan now includes plans to canvass 38% of addresses, resulting in significant cost increases.<sup>72</sup>

Beyond the cost increases, the funding decisions have also jeopardized the quality of MAF. According to an OIG investigation, the address canvassing portion of the 2018 Census Test had significant issues and inaccuracies—61% of the 433 locations tested showed significant

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<sup>66</sup> For a review of the literature, see Edward Kissam, *A Summary Review of Research Relevant to Housing Units Missing from the Census Bureau’s Master Address File (MAF)*, WKF Giving Fund <http://www.wkffamilyfund.org/docs/Wkf%20%20A%20Summary%20Review%20of%20Research%20Related%20to%20Census%20Missing%20Housing%20Units%20-%203Oct.pdf>; see also William P. O’Hare, et. al., *The Invisible Ones*, NALEO Educational Fund (April 2016), <ftp://ftp.census.gov/cac/nac/meetings/2016-11/2016-04-latino-children.pdf>.

<sup>67</sup> Rodney Terry, et. al., *Exploring Inconsistent Counts of Racial/Ethnic Minorities in a 2010 Census Ethnographic Evaluation*, Bulletin of Sociological Methodology 135, no. 1, 32-49, 42 (2017); M. De la Puente, *Why are People Missed or Erroneously Enumerated in the Census – A Summary of Findings from Ethnographic Research. Proceedings of the 1993 Research Conference on Undercounted Ethnic Populations* (1993); A survey of San Joaquin Valley Latino Immigrants found that one-fifth of those in the U.S. in 2010 say they never received a census form in 2010 and were not contacted by an enumerator. Edward Kissam, et. al., *San Joaquin Valley Latino Immigrants*, San Joaquin Valley Health Fund (January 2019), [https://cviic.org/wp-content/uploads/2019/01/SJVCRP\\_Survey\\_Findings\\_Report\\_011819-small.pdf](https://cviic.org/wp-content/uploads/2019/01/SJVCRP_Survey_Findings_Report_011819-small.pdf).

<sup>68</sup> D’Vera Cohn and Jeffrey S. Passel, *A Record 64 Million Americans Live in Multigenerational Households*, Pew Research Center (April 5, 2018), <https://www.pewresearch.org/fact-tank/2018/04/05/a-record-64-million-americans-live-in-multigenerational-households/>.

<sup>69</sup> U.S. Government Accountability Office, *2020 Census: The Address Canvassing Test Revealed Cost and Schedule Risks and May Not Inform Future Planning as Intended*, Final Report No. OIG-17-024-A (May 11, 2017), <https://www.oig.doc.gov/OIGPublications/OIG-17-024-A.pdf>.

<sup>70</sup> *Id.*

<sup>71</sup> U.S. Government Accountability Office, *2020 Census: Actions Needed to Improve In-Field Address Canvassing Operation*, GAO-18-414, 7 (July 16, 2018).

<sup>72</sup> U.S. Census Bureau, *2020 Census Operational Plan: A New Design for the 21st Century*, V. 4. (December 2018), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan4.pdf>.

differences between the in-office and in-field results.<sup>73</sup> The investigation reported that a 2016 test estimated that 1.4 million households could be missed as a result of inaccuracies from in-office canvassing. Aerial imagery is not able to identify low-visibility housing accommodations (e.g., housing in a garage) and administrative records are more likely to be incomplete for racial and ethnic minorities.

Despite these clear issues, the Census Bureau has failed to evaluate the impact of this design change on the count of racial and ethnic minorities or to develop an appropriate mitigation strategy. As reported in the latest operational plan, the Master Address File Coverage Study was “paused in FY2017 due to budget considerations.”<sup>74</sup> The cancelled Master Address Coverage Study had been the way the Census Bureau planned to “locate areas that are in need of in-field address canvassing” and “generate national and sub-national estimates of MAF coverage.”<sup>75</sup> As reported by the OIG, the Census Bureau has not evaluated “which populations or regions will be most affected by the missed households.” Moreover, the Bureau “has not conducted any analysis to show that [proposed mitigation] strategies will fix the problems—and does not plan to conduct any analysis before the 2020 decennial census. As a result, the Bureau does not know how the error rate of in-office address canvassing will affect the quality of the 2020 decennial census.”<sup>76</sup> In response to the OIG recommendations, the Census Bureau acknowledged “[t]he Census Bureau is planning an evaluation in the 2020 Census that will try to measure the accuracy of the address canvassing operation . . . although no necessarily according to their effects on the coverage of different demographic groups.”<sup>77</sup>

Evidence from community-based address canvassing as part of the Local Update of Census Address (LUCA) program, however, has found that hidden housing units that otherwise would have been omitted from MAF are overwhelmingly minority households: “the neighborhoods where in-field community-based address canvassing added newly-identified housing units are mostly ones with high proportions of households headed by non-citizens, racial/ethnic minority respondents, and heads of household with lower-than average educational attainment.”<sup>78</sup> Unfortunately, LUCA participation is uneven across the country with some local areas vigorously seeking to improve the MAF (e.g., California has budgeted \$7 million for LUCA efforts), but other jurisdictions doing little or nothing. For example, there are many border areas in Texas with HTC tracts that have neither a county nor state level LUCA partnership.<sup>79</sup> Critically, these LUCA efforts

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<sup>73</sup> Office of Inspector General, *2020 Census: Issues Observed During the 2018 End-to-End Census Test's Address Canvassing Operation Indicate Risk to Address List Quality*, OIG-19-008-A (February 2019), <https://www.oversight.gov/sites/default/files/oig-reports/archive/17803/OIG-19-008-A.pdf>.

<sup>74</sup> 2020 Census Operational Plan, V4.0, 15.

<sup>75</sup> Evan Boyd et al., *An Overview of the Master Address File Coverage Study*, U.S. Census Bureau, Decennial Statistical Studies Division, JSM 2016 - Survey Research Methods Section (2016), <http://www.asasrms.org/Proceedings/y2016/files/389525.pdf>.

<sup>76</sup> Office of Inspector General, *2020 Census: Issues Observed During the 2018 End-to-End Census Test's Address Canvassing Operation Indicate Risk to Address List Quality*, OIG-19-008-A, 11 (February 2019).

<sup>77</sup> *Id.* at 19.

<sup>78</sup> Ed Kissam, Cindy Quezada, and Jo Ann Intili. "Community-based canvassing to improve the US Census Bureau's Master Address File: California's experience in LUCA 2018." *Statistical Journal of the IAOS Preprint* (2018), 609.

<sup>79</sup> <https://gis-portal.data.census.gov/arcgis/apps/MapTools/index.html?appid=23c7b120c28844368eb5b71be041743e>



highlight the failures in the Census Bureau's address canvassing plans: "It reflects inadequate analysis of the ways in which housing units come to be included (or not) in its Master Address file and how these processes function in different areas of the nation."<sup>80</sup>

[REDACTED]<sup>81</sup> but the bigger concern is about the households omitted from MAF that *never* get added. Critically, as discussed later in this report, the Census Bureau has eliminated programs that had been previously successful at enumerating households omitted from MAF.

## 2. Internet Self-Response

A second key redesign in the 2020 Census is the use of the internet as the mode of self-response for most households. For the majority of households, the Census Bureau will mail a unique online ID and website address for completion of the census online. An online response option was actually piloted in the 2000 Census, but not publicized or widely used (less than 1% of households completed it online). The Census Bureau decided against an internet option in 2010, citing security risks, logistical concerns, and lack of evidence regarding the impact on cost and quality.<sup>82</sup>

Although this is a design that could make completion of the census form more convenient for many households, there is considerable evidence that it could exacerbate the differential self-response of racial and ethnic minorities. There are well-recognized disparities in access and comfort with the Internet across racial and ethnic groups. A 2018 Census Report shows that 73% of Black households have an internet subscription compared to 84% of Non-Hispanic White households.<sup>83</sup> It is not simply a gap in access, however. In the 2016 American Community Survey (ACS),<sup>84</sup> just 23% of Black households responded by Internet compared to 43% of White households.<sup>85</sup> In other words, Black households are more reluctant to self-respond online *even when they have Internet access*.<sup>86</sup> Given research showing racial and ethnic minorities have lower

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<sup>80</sup> Kissam et al. (2018), 611.

<sup>81</sup> [REDACTED]

<sup>82</sup> Internet self-response is a risk factor for the 2020 Census given the potential for the technology to not perform to expectations and potential cybersecurity threats. Camille Ryan, *Computer and Internet Use in the United States: 2016. American Community Survey Reports*, ACS-39 (August 2018).

<sup>83</sup> *Id.*; U.S. Census Bureau (2018b).

<sup>84</sup> The American Community Survey is an ongoing survey conducted by the Census Bureau that provides vital information on a yearly basis about our nation and its people. Information from the survey generates data that help determine how more than \$675 billion in federal and state funds are distributed each year. See U.S. Census Bureau, *About the American Community Survey*, <https://www.census.gov/programs-surveys/acs/about.html>.

<sup>85</sup> See William P. O'Hare, *Differential Undercounts in the U.S. Census Who is Missed*, Springer International Publishing, 156 (2019). The ACS is an ongoing household survey conducted by the U.S. Census Bureau that collects socioeconomic and demographic information about the population once collected by the decennial census long-form.

<sup>86</sup> Paul Beatty et al., *2015 American Community Survey Research And Evaluation Report Memorandum Series #Acs15-Rer-10*, Economics and Statistics Administration U.S. Census Bureau (September 4, 2015), [https://www.census.gov/content/dam/Census/library/working-papers/2015/acs/2015\\_Nichols\\_01.pdf](https://www.census.gov/content/dam/Census/library/working-papers/2015/acs/2015_Nichols_01.pdf).

trust in government, greater concerns about census confidentiality, and greater fears of repercussions from completing the census, it should be no surprise to find resistance to completing the census online given recognized risks of cyberattacks and data breaches.<sup>87</sup> Public opinion surveys also indicate that Black and Hispanic respondents are generally more concerned about Internet data security, digital privacy, and the threat of hackers.<sup>88</sup>

The Census Bureau's planned approach for handling these attitudinal and access disparities has not been adequately evaluated. According to the Operational Plan, 22% of households will be designated as "Internet Choice," rather than "Internet First," and will receive a paper questionnaire in addition to the online ID. Yet, this designation is based on modeling of census tracts, not individual households, and relies on a model that explains just 55% of the variance in the data.<sup>89</sup> As a result, many households will not fit the profile of the tract classification and could receive a less effective targeting approach. The Census Bureau's own research indicates that such errors could reduce self-response of Black households. In a study of the ACS, Census Bureau research found that targeting Black individuals with an "Internet First" message reduced self-response: "Contrary to our expectations, we also found that households with a Black respondent were slightly less likely to self-report when the internet option was offered, in spite of their internet penetration rate of 85 percent."<sup>90</sup> This finding is consistent with survey methodology research that finds a "web-push" approach gets lower response rates compared to a paper only survey.<sup>91</sup> According to one census researcher such tailoring mismatches, along with "usability issues" and optimization for mobile devices, were among the 2020 census design issues that kept her up at night.<sup>92</sup>

Given the targeted nature of the "Internet Choice" option, it is difficult to precisely isolate the likely impact of the internet self-response design change on the undercount of racial and ethnic minorities. Nonetheless, the 2018 Census Test offers a worrisome indication given the high

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<sup>87</sup> Chris Hamby, *Hacking, Glitches, Disinformation: Why Experts Are Worried About the 2020 Census*, The New York Times (July 3, 2019), <https://www.nytimes.com/2019/07/03/us/2020-census-digital.html>; Kyley McGeeney, et al., *2020 Census Barriers, Attitudes, and Motivators Study Survey Report A New Design for the 21st Century*, version 2.0. (January 24, 2019).

<sup>88</sup> An AP-Norc Poll from April 2018, for example, found that 58% of Black social media users were concerned about hackers gaining access to their data compared to 36% of White social media users. *See Americans' Views of Privacy and Digital Security in the Digital Age*, AP (April 2018), <http://www.apnorc.org/projects/Pages/Americans%E2%80%99-Views-of-Privacy-and-Data-Security-in-the-Digital-Age.aspx>. Calculated from data available at that link.

<sup>89</sup> C. Erdman and N. Bates, *The Low Response Score (LRS): A Metric to Locate, Predict, and Manage Hard-to-Survey Populations*, Public Opinion Quarterly, Volume 81, Issue 1, 144–156 (March 2017), <https://www.census.gov/srd/papers/pdf/rrs2014-08.pdf>.

<sup>90</sup> U.S. Census Bureau, *2015 American Community Survey Research And Evaluation Report Memorandum Series*, #ACS15-RER-10, Memo from Paul Beatty and Patrick Cantwell, Prepared by Elizabeth Nichols, et al. Rachel Horwitz and Jennifer Guarino Tancreto (September 4, 2015).

<sup>91</sup> D. Dillman et al. *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. 4th ed. New Jersey: John Wiley and Sons (2014).

<sup>92</sup> Nancy Bates, *Discussant*, The 2019 Joint Program in Survey Methodology Distinguished Lecture (2019), <https://jpsm.umd.edu/Resources/dl2019>. For example, Bates expressed skepticism about the Census Bureau projection that the majority of the population segment titled Multicultural Mosaic (majority Hispanic) was projected to complete their forms online. *Id.*

internet penetration rate in Providence County, Rhode Island.<sup>93</sup> Despite high levels of access, the 2018 Test had a massive internet self-response gap between the White and Black populations—45% of the White population self-responded online compared to just 21% of the Black population.<sup>94</sup> This suggests that a 2020 census design that encourages most households to complete the census online is likely to decrease the percentage of racial and ethnic minorities who self-respond to the decennial count.

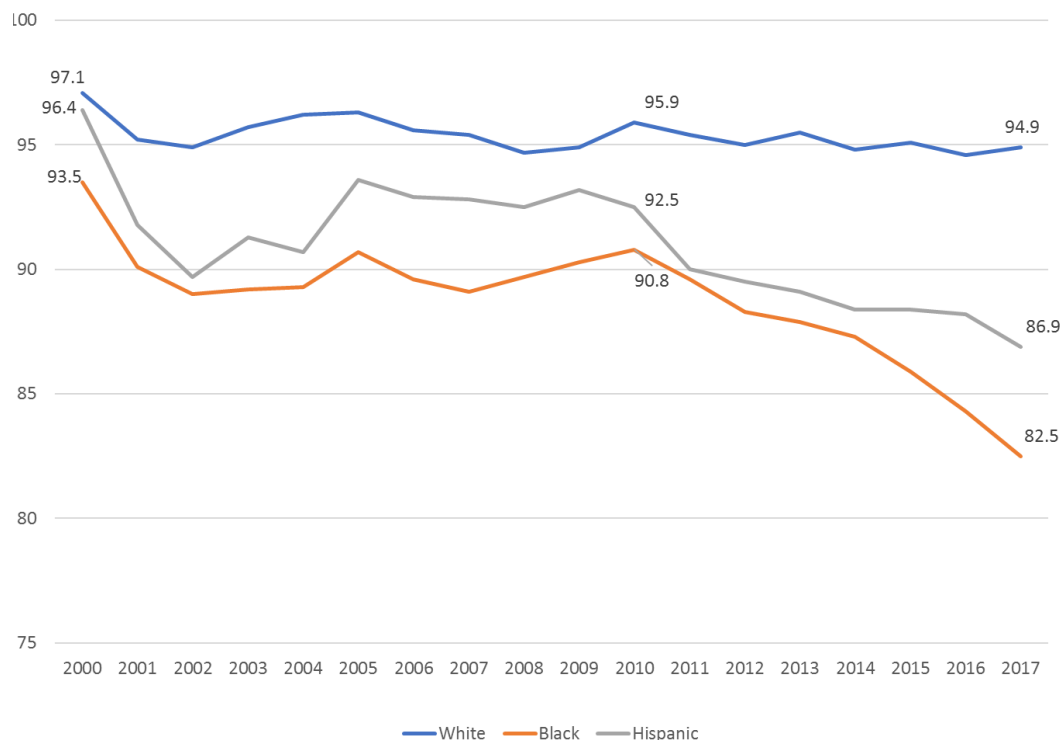
This pattern is already evident in comparing self-response to Census Bureau surveys over the decade. Self-response patterns to Census surveys underscore these attitudinal and access disparities. In the 2010 decennial count, conducted by mail, White individuals had an 82.5% self-response rate, compared to 70% among Black populations—a 12.5 percentage point gap. In the 2018 Census Test, which incorporated internet self-response, that gap expanded to 29 percentage points (68% among White individuals; 39% among Black individuals). A similar widening has been observed in the ACS, which increasingly relies in part on internet self-response, as shown by trends in the coverage rates across time. Coverage rates are calculated compared to an independent population estimate, and a lower value represents lower coverage of the sub population. As can be seen in Figure 5, the gap in coverage rates between White individuals and Black individuals in the ACS grew from 4.1 in 2010 to 12.4 in 2017.<sup>95</sup> Both of these patterns suggest that the gap in self-response rate between White individuals and Black individuals could more than double for the 2020 count.

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<sup>93</sup> According to the ACS, 80% of households have home broadband internet (and the FCC reports that only 1.3% are due to lack of access—much lower than the national average). *Mapping Hard to Count (HTC) Communities for a Fair and Accurate 2020 Census*, HTC 2020, <https://www.censushardtocountmaps2020.us/>.

<sup>94</sup> U.S. Census Bureau, Albert E. Fontenot, Jr., *Update on the 2020 Census: Presentation to the National Advisory Committee* (May 2, 2019). The overall differential self-response rate was 68% among the White population and 39% among the Black population. A more informative quantity of interest would be to see the self-response rates by race conditional on the mailing treatment.

<sup>95</sup> Census researchers have attributed the improvement in 2010 relative to 2009 to be a spill-over effect of the Integrated Campaign Communications Campaign in 2010. See Nancy Bates, *Hard-to-Survey Populations and the U.S. Census: Making Use of Social Marketing Campaigns* (2017), <https://www.degruyter.com/downloadpdf/j/jos.2017.33.issue-4/jos-2017-0040/jos-2017-0040.pdf>. Given the small size of the observed bump, this too points to a dramatically worsened differential undercount in 2010.

**Figure 5: ACS Coverage Rates, 2000-2017**

Note: Recreated using data from U.S. Census Bureau, American Community Survey, <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/coverage-rates/>.

All of the empirical evidence gathered by the Census Bureau about the use of internet self-response by Black individuals compared to White individuals highlights the need for extensive testing to estimate the impact of the design change on HTC populations and the importance of investing in a robust and well-designed outreach program.

### 3. Administrative records

Another aspect of the census redesign is the use of administrative records in the Non-response Follow-up (NRFU) operation, the process that enumerates those households that fail to self-respond. Administrative records refer to micro data records contained in files collected and maintained by administrative agencies, such as the U.S. Postal Service, Internal Revenue Service, or the Social Security Administration. In previous censuses, in-field enumerators visited the home of every non-responding household. In 2020, administrative records will be used to classify a non-responding household as occupied, vacant, or nonexistent (thus removing it from the NRFU workload) and to enumerate the household. The operational plan outlines that administrative records will be used if a household is not counted after one visit and if the administrative records are of “sufficient quality.” Administrative records will be used identify vacant households and to fill in the responses if the administrative records are deemed to be of adequate quality. The Census Bureau acknowledges that the use of administrative records has been driven by cost considerations. In testimony to Congress, former census director John Thompson explained that administrative records would “reduce the [NRFU] workload . . . [and] result in a savings of \$1.4 billion.” In a

study of public opinion toward the use of administrative records, census researchers explicitly acknowledge: “Due to the increasing and unsustainable cost of conducting censuses in the traditional manner, the Census Bureau is looking to leverage administrative records housed elsewhere in the government to supplement and/or replace costly nonresponse followup operations in future censuses.”<sup>96</sup> A GAO report similarly acknowledges that “The Bureau plans to control such cost growth for the 2020 Census by, among other actions, relying on administrative records to help reduce expensive and unnecessary field visit follow-ups to vacant or non-existing households.”<sup>97</sup>

This operational change is one that the Census Bureau recognizes is going to be less effective for counting HTC households. Administrative records are less available and lower quality for racial and ethnic minorities.<sup>98</sup> As reported in a GAO report, “records generally tend to over-represent white and economically-advantaged populations in comparison to how other groups appear in the records.”<sup>99</sup> A 2017 Urban Institute Research Report concluded that “vulnerable and hard-to-reach subpopulations may be systematically underrepresented by the new procedures. These subpopulations may not have the same body or quality of administrative records as other groups.” Another study concludes that “[g]iven the unevenness in which groups are represented in the Administrative Records . . . they could increase some of the undercount differentials in the 2020 Census. There is no doubt that using administrative records instead of repeated visits to non-responding households will save money, but it not clear yet that it will not compromise quality.” Young children are especially likely to be missed by administrative records.<sup>100</sup>

The use of administrative records can worsen the differential undercount in two ways: First, the lack of administrative records for racial and ethnic minorities could increase the likelihood that occupied Non-White households get mistakenly classified as vacant.<sup>101</sup> Indeed, census research using administrative records predicted a higher frequency of vacant households than shown in 2010 for areas with a high concentration of Black households.<sup>102</sup> Second, because records are more available for White households, those individuals are more likely to be enumerated. Finally, the use of administrative records increases the risk and perception of risk about the confidentiality of the census which disproportionately affects Black and Hispanic households.<sup>103</sup> Census research

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<sup>96</sup> Nancy Bates et al., *Public Attitudes Toward the Use of Administrative Records in the U.S. Census: Does Question Frame Matter?*, Survey Methodology #2012-04, Center for Survey Measurement, U.S. Census Bureau, 1 (April 25, 2012), <https://www.census.gov/srd/papers/pdf/rsm2012-04.pdf>.

<sup>97</sup> U.S. Government Accountability Office, *2020 Census Bureau Is Taking Steps to Address Limitations of Administrative Records*, GAO-17-664 (July 2017), <https://www.gao.gov/assets/690/686099.pdf>.

<sup>98</sup> *Id.*; see also Richard A. Griffin, *Issues Concerning Imputation of Hispanic Origin due to Administrative Record Enumeration for the 2020 Census*, Proceedings of the Survey Research Methods Section, American Statistical Association (2014), [http://www.asasrms.org/Proceedings/y2014/files/311893\\_88330.pdf](http://www.asasrms.org/Proceedings/y2014/files/311893_88330.pdf).

<sup>99</sup> *Id.* at 5.

<sup>100</sup> Leticia Fernandez et al., *The Use of Administrative Records and the American Community Survey to Study the Characteristics of Undercounted Young Children in the 2010 Census*, CARRA Working Paper Series Working Paper Series #2018 – 05 (May 25, 2018), <https://www.census.gov/content/dam/Census/library/working-papers/2018/adrm/carra-wp-2018-05.pdf>.

<sup>101</sup> U.S. Government Accountability Office, *2020 Census Bureau Is Taking Steps to Address Limitations of Administrative Records*, GAO-17-664, 6(July 2017), <https://www.gao.gov/assets/690/686099.pdf>.

<sup>102</sup> *Id.* at 6.

<sup>103</sup> *Id.* at 7.



examining public opinion towards administrative records found that Black respondents and Hispanic respondents were less likely than White respondents to say they would prefer to have their household enumerated using administrative records rather than with an interviewer coming to their homes.<sup>104</sup> Despite concerns raised by stakeholders and advisory committees, the Census Bureau has not sufficiently evaluated the impact of the use of administrative records on the count of HTC households.<sup>105</sup> When they raised the need for additional research and testing, CSAC was told that testing “could not be extended simply because time is too short.”<sup>106</sup>

The Urban Institute projections of the differential undercount in 2020 assuming that the 2020 Census proceeds as planned by the Census Bureau’s operational plans find an undercount of Black individuals of 3.24% (a differential undercount of 3.54%) and an undercount of Hispanic individuals of 2.84% (a differential undercount of 3.14%).<sup>107</sup> In their high risk scenario, which took into account the anticipated impact of the a citizenship question and using the Census Bureau’s most conservative self-response estimate of 55.5%, the undercount of Black individuals is estimated to be 3.68% (differential undercount of 3.71%) and of Hispanic individuals is 3.57% (differential undercount of 3.6%).<sup>108</sup>

Here again, the evidence points to the need for explicit testing and evaluation of the effect of the design change on the count of racial and ethnic minorities and for investing in a robust outreach campaign. Unfortunately, as reviewed below, underfunding resulted in inadequate research and testing and a failure to develop an effective outreach campaign.

#### **D. Inadequate Research and Testing**

Although the Census Bureau adopted significant changes for the 2020 Census to meet budget constraints mandated by Congress, these new approaches have undergone insufficient testing, in large part because of funding shortfalls and budget uncertainties. As a result, the Bureau has been left ill-equipped to address the impact of the proposed changes on the undercount of racial and ethnic minorities, in the face of considerable evidence that these designs will be less effective at fully enumerating hard to count households.

While the Census Bureau always conducts field tests over the course of the decade in preparation for the decennial count, testing for 2020 was especially critical given the proposed design changes and the evidence that the redesign could be less effective for HTC households.<sup>109</sup>

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<sup>104</sup> Bates et al., *supra* n. 87 at table 2B.

<sup>105</sup> *National Advisory Committee Working Group on Administrative Records, Internet, and Hard to Count Population Final Report*, [https://www2.census.gov/cac/nac/reports/2016-07-admin\\_internet-wg-report.pdf](https://www2.census.gov/cac/nac/reports/2016-07-admin_internet-wg-report.pdf).

<sup>106</sup> *U.S. Census Bureau response to Census Scientific Advisory Committee Recommendations tabled from the Fall 2018 Meeting on December 6-7, 2018*, Economics and Statistics Administration U.S. Census Bureau (May 15, 2019), <https://www2.census.gov/cac/sac/meetings/2019-02/2019-05-15-census-response.pdf?#>.

<sup>107</sup> From the medium-risk scenario in Diana Elliott, et. al., *Assessing Miscounts in the 2020 Census*, Urban Institute, Table 1 (2019).

<sup>108</sup> From the high risk scenario in *id.*

<sup>109</sup> The Census Bureau canceled some field tests prior to the 2010 Census as it made last-minute operational changes.

While writing in support of the proposed redesigns, the National Academy of Sciences (NAS) emphasized the need for “proper evaluation” to avoid “a risk of substantial reduced quality.”<sup>110</sup> The GAO advised that “Rigorous testing is a critical risk mitigation strategy because it provides information on the feasibility and performance of individual census-taking activities, their potential for achieving desired results, and the extent to which they are able to function together under full operational conditions.”<sup>111</sup> On top of that, the GAO points to the risks of cybersecurity breaches and/or natural disasters. Yet, budget constraints and uncertainties led to a number of field test delays and cancellations over the decade, including:

- 2010-2012: Cancellation of 13 of 25 initially scheduled tests from the 2010 Census designed to inform the 2020 Census. The OIG further found that the Census Bureau used re-baselining of project deadlines in ways that “obfuscates delays to project activities.”<sup>112</sup>
- 2013: Delays in field tests and preparatory work related to 2014 Field tests.<sup>113</sup>
- 2015: Delays in 2015 Census test outreach limited activities; Funding limitations meant there were no non-English language television ads.<sup>114</sup>
- 2017: Cancellation of the Master Address File Coverage Study.
- 2017: Cancellation of field tests in Puerto Rico, the Standing Rock Reservation in North Dakota and South Dakota, and the Colville Reservation and Off-Reservation Trust Land in Washington state.
- 2017: Delays in work on the Integrated Communications Contract.
- 2017: Delays in hiring partnership specialists and opening regional census offices.
- 2018: Cancellation of End-to-End tests in Washington state and West Virginia.

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<sup>110</sup> *Envisioning the 2020 Census*, National Research Council, National Academies Press, 8 (2010), <https://doi.org/10.17226/12865>.

<sup>111</sup> GAO-19-431T, 14.

<sup>112</sup> *2020 Census Planning: Research Delays and Program Management Challenges Threaten Design Innovation*, Final Report No. OIG-14-003-A (December 3, 2013). In the January 2013 R&T schedule, 28% of research activities were delayed at least 30 days. Although the March schedule showed improvement at first glance with less than 10 percent of activities delayed by 30 days, using baselines from January’s schedule revealed that actually more than 40% of March’s activities were delayed at least 30 days, and 17% were delayed at least 180 days.

<sup>113</sup> Tom Mesenbourg, Census Bureau Budget Update, Director Blog (June 19, 2013).

<sup>114</sup> Monica Vines, *2015 Census Test: Advertising and Partnerships Savannah DMA National Advisory Committee* (October 8, 2015).

- 2018: Cancellation of coverage assessments of the 2018 End-to-End Test.

The consequences of test cancellations can be difficult to quantify but are widely recognized to impact both cost and quality. In 2011, then-Director Robert Groves pointedly concluded “[a] cut of this magnitude in our periodic programs account means we cannot do all of the work that Congress has asked us to do.”<sup>115</sup> In another report, the OIG concluded “the effect of the delays is clear”—finding that delays in results meant results were not available “early enough to take advantage of their findings in designing their projects.”<sup>116</sup>

Of most relevance was that cancellations and delays meant the Census did not adequately evaluate the impact of census design changes on the enumeration of HTC households.<sup>117</sup> An OIG report concluded that two of the canceled evaluations of the 2010 census were “critical to informing the 2020 undercount.”<sup>118</sup> In discussing the implications of delays in the communications campaign, the Bureau admitted that “[w]ork needs to start now on tailoring messages to populations that will motivate them to respond to the census as well as on the advertising strategy to reach people where they are. Delays in this work could lead to lower response in 2020 and additional non-response follow-up workload.” Cancellations meant that there was no testing of new procedures for Native American households—a group that was undercounted by 4.9% in 2010.<sup>119</sup>

In February 2017, the GAO added the 2020 count to its high-risk list, specifically mentioning a field test cancellation as “a lost opportunity to test, refine, and integrate operations and systems” and concluding that “it will be imperative that the Bureau have systems and operations in place for the 2018 End-to-End Test.”<sup>120</sup> Unfortunately, that did not happen. The 2018 End-to-End test was supposed to be a full “dress rehearsal,” but that simply wasn’t the case given

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<sup>115</sup> Robert Groves, *The Consequences of Budget Cuts*, U.S. Census Bureau (July 15, 2011), <https://www.census.gov/newsroom/blogs/director/2011/07/the-consequences-of-budget-cuts.html>.

<sup>116</sup> FY2013 and FY2014 began with continuing resolutions and FY2013 saw a mid-year budget reduction from sequestration—automatic budget cuts resulting from the Budget Control Act of 2011.

<sup>117</sup> More broadly, the GAO has identified management issues in the plans to enumerate hard-to-count populations: “[the] bureau’s hard-to-count efforts are distributed across over one third of its 35 operations supporting the 2020 Census. And while decentralized operations can provide flexibility, to enhance visibility over these hard-to-count efforts, the Bureau recently developed a draft operational document. However, the Bureau will continue to face challenges in ensuring its hard-to-count efforts integrate with each other. For example, some of the detailed plans for 10 of the hard-to-count efforts were released in 2016 and are awaiting updates, while 4 plans have yet to be released. With less than 2 years until Census Day (April 1, 2020), there is little room for delay. Therefore, to ensure that emerging plans related to the hard-to-count efforts integrate with existing plans, Bureau management will need to continue its focus on control of the changes in hard-to-count efforts moving forward.”

<sup>118</sup> U.S. Government Accountability Office, *U.S. Census Bureau 2020 Census Planning: Delays with 2010 Census Research Studies May Adversely Impact the 2020 Decennial Census*, Final Report No. OIG-12-023-1 (April 5, 2012).

<sup>119</sup> In recognition of this, the Bureau said it would consider adding the sites to the 2018 End-to-End Census Test, but that did not happen. See John H. Thompson, *U.S. Census Bureau Announces Changes to 2017 Field Tests*, U.S. Census Bureau (October 18, 2016), [https://www.census.gov/newsroom/blogs/director/2016/10/u\\_s\\_census\\_bureau.html](https://www.census.gov/newsroom/blogs/director/2016/10/u_s_census_bureau.html).

<sup>120</sup> *Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, U.S. Government Accountability Office, GAO-17-317 (February 2017), 224, <https://www.gao.gov/products/GAO-17-317>.



the pared down scope, difference in content, and the elimination of outreach. Testing in Providence County, Rhode Island—a county that is majority White with widespread broadband access—did not offer the needed lessons for enumerating HTC areas.<sup>121</sup> Perhaps most importantly, the cancellation of three coverage measurement operations from the scope of the test meant it wasn't even possible to estimate the undercount in the 2018 field test.

This inadequate testing also creates uncertainties in cost estimates. Although the Census Bureau initially projected a life-cycle cost estimate of \$12.5 billion (meeting the Congressional mandate), that estimate was deemed unreliable. A 2014 Office of Inspector General (OIG) report stated “we have identified significant internal control weaknesses that prevent the Bureau from assessing (1) the effects of reduced funding, (2) return on investment of current research and testing (R&T) projects, and (3) variance between budgeted versus actual costs when implementing budget reductions. Past oversight reports have highlighted similar weaknesses, but the weaknesses persist.”<sup>122</sup> As one example, an OIG audit of the field operation budget found that estimated budget savings were unreliable and not supportable; in criticizing one specific cost estimate, the OIG concluded that it “raises doubt as to whether the projected 50 percent reduction . . . was reasonable from the beginning.”<sup>123</sup> In 2017 congressional testimony, Secretary Ross gave a revised 2020 Census cost estimate of \$15.6 billion, a 27 percent increase over the 2015 estimate, attributable to reduced assumptions for self-response rates, increased IT costs, and increased contingency allocations to account for risks.<sup>124</sup> In August 2018, the GAO again warned that the revised \$15.6 billion cost estimate was “not reliable.”<sup>125</sup>

Likewise, the Census Bureau estimate that a one percentage point decrease in self-response rate will increase costs by \$55 million rests on the implausible assumption that any additional decrease in self-response is no harder to enumerate. Yet, individuals who fail to self-respond because of concerns about confidentiality are likely to be harder to count than those who fail to self-respond for other reasons.<sup>126</sup> In evaluating the likely impact of the citizenship question, for example, census researchers conclude that “[i]f a household declines to self-respond due to the citizenship question, we suspect it would also refuse to cooperate with an enumerator coming to

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<sup>121</sup> According to FCC, broadband access is 99 percent and adoption is greater than 80 percent. See *Mapping Broadband Health in America 2017*, FCC, <https://www.fcc.gov/reports-research/maps/connect2health/background.html>; According to the 2010 Census, 66 percent of the population is Non-Hispanic White.

<sup>122</sup> *The Census Bureau Lacks Accurate and Informative Cost Data to Guide 2020 Census Research Through a Constrained Budget Environment*, Final Report No. OIG-14-021-A, U.S. Census Bureau (May 21, 2014), <https://www.oig.doc.gov/OIGPublications/OIG-14-021-A.pdf>.

<sup>123</sup> *2020 Census: The Number and Location of Area Census Offices May Not Reflect NRFU Workload Demands and Will Not Result in Projected Cost Savings* Final Report No. OIG-18-018-A, U.S. Government Accountability Office (April 30, 2018), <https://www.oig.doc.gov/OIGPublications/OIG-18-018-A.PDF>.

<sup>124</sup> The GAO attributes the change in cost estimate to a change in assumptions about the self-response rate (reducing from 63.5 percent to 60.5 percent in 2017) accounting for \$1.3 billion, increased contingency allocation from \$1.3 billion to \$2.6 billion, and increase in IT costs of \$838 million.

<sup>125</sup> U.S. Government Accountability Office, *2020 CENSUS: Census Bureau Improved the Quality of Its Cost Estimation but Additional Steps Are Needed to Ensure Reliability*, GAO-18-635, 28 (Sep 17, 2018).

<sup>126</sup> David Brown et al., *Understanding Quality of Alternative Citizenship Data Sources for the 2020 Census*, Center for Economic Studies, U.S. Census Bureau Working Paper, 18–38 (Aug. 6, 2018).

their door, resulting in a need to use a proxy,”<sup>127</sup> which is well-documented to reduce data quality. The estimate also assumes no change in levels of Area Census Office (ACO) and Region Census Center staff to support field operations, which seems unrealistic given the geographic concentration of racial and ethnic minorities who are likely to have increased confidentiality concerns and a reduced trust in the Census Bureau associated with the citizenship question controversy.

In addition, the Census Bureau also prepares contingency plans and funding. In 2017, the lifecycle cost estimate increased contingency allocation from \$1.3 billion to \$2.6 billion to account for deviations from the operational plan. But the 2020 presidential budget request includes no contingency funding request, despite subsequent decisions and evidence that point to even greater risk that the self-response rate will be lower than projected.

## **VI. Failures of Funding and Planning for the Expected Undercount**

As described in the prior section, the Census Bureau has faced significant cost constraints for conducting an accurate and complete census in 2020 given trends in census attitudes, participation, and costs, and has made significant and inadequately tested, cost-driven design changes that will impact HTC communities most. In the next section, I evaluate how cost considerations have also led to unreasonably low funding for programs that are designed to support the enumeration of HTC communities, which, particularly in light of the challenges detailed in the prior section, evince a Census program not reasonably designed to accurately count those populations.

### **A. The Importance of Adequate Funding**

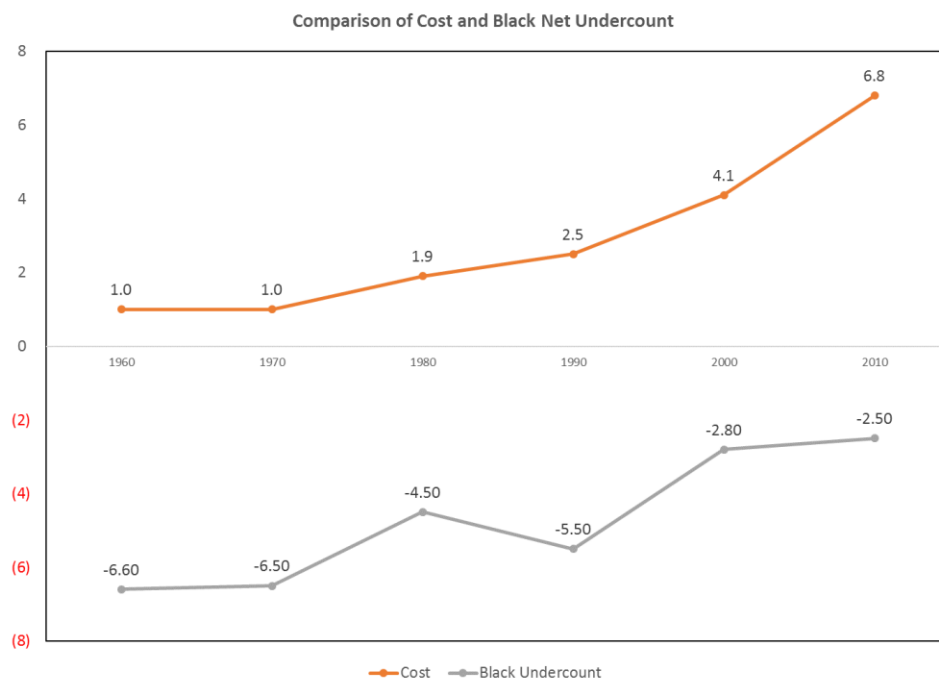
At a fundamental level, cost and quality are related. Statistical decision theory recognizes that accuracy can be improved through greater investment of resources.<sup>128</sup> We also see the relationship empirically in historical census data, shown in Figure 6—as the cost of enumerating a household (expressed relative to 1960 costs) increased, the net undercount of Black individuals has improved (expressed as negative number).<sup>129</sup> Although the number of data points is small, the correlation (.90) is strong.

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<sup>127</sup> *Id.* at 42 n.59.

<sup>128</sup> Zachary H. Seeskin and Bruce D. Spencer, *Effects of Census Accuracy on apportionment of congress and Allocations of Federal Funds*, Northwestern University - Institute for Policy Research Working Paper WP-15-05 (May 18, 2015), <http://www.ipr.northwestern.edu/publications/papers/2015/ipr-wp-15-05.html>.

<sup>129</sup> Author recreation of graph in William P. O’Hare, *Differential Undercounts in the U.S. Census Who is Missed*, Figure 14.1 (2019).

**Figure 6: Comparison of Census Cost Per Household and Black Net Undercount**

Note: Recreated from O'Hare (2019).

Despite that importance, decisionmaking around the core programs designed to reach and support the enumeration of minority populations – particularly in light of the failures identified in the prior sections – have reduced funding to such a point that those populations cannot expect a count that is likely to fall within the range of past censuses. To the contrary, based on the combination of circumstances, decisions and factors detailed above, the only rational conclusion that the Census Bureau can reach is that more funding for these programs is required in order to count minority populations. Yet, as detailed below, funding for these programs has been cut. Those cuts will have a severe impact on the ability of the Census Bureau to count those populations.

## **B. Cuts to Key Programs**

The Census Bureau has cut programs in at least three areas that are critical to counting minority populations, particularly in light of the various circumstances described in the prior section.

### **1. Communication Campaign/Partnership Program**

A core part of the Census Bureau's strategy for reducing differential self-response rates is the Integrated Partnership and Communications operation. This communication and outreach campaign is intended to communicate the importance of participating in the census, to engage and motivate people to self-respond, and to raise and keep awareness high throughout the entire enumeration process. A primary goal of these efforts encourage participation of HTC

households—those “less likely to response or [who] are often missed.”<sup>130</sup> Activities include paid media advertising, partnership efforts in local communities, a Census in Schools program for outreach to students in elementary and secondary schools, website development, and social media communication. Unfortunately, underfunding has jeopardized the scope and effectiveness of these efforts, and available evidence suggests that these efforts will be unable to close the likely gap in self-response between White and Non-White households.

There are many reasons why the communication task in 2020 will be more difficult than in 2010, beyond the issues already outlined. First, the communications environment is more difficult in 2020 compared to 2010. The current fragmented and complex information environment makes it more difficult to reach the public. Second, communications about the 2020 Census will also have to compete directly with a presidential election, whose primary season will overlap with much of the count. Several states will be in the midst of their primary elections. This macro-environment creates competition for field staff hiring and the media and communication environment. The Census Bureau will be faced with the challenge of channeling political discourse to apolitical discussion of the purposes of the decennial census and its importance to the whole country, even as the 2020 Census has already politicized. The paid media is also likely to be more expensive than usual because of competition from political advertising buys.

Third, the communications campaign must overcome significant negative attitudes, specifically the confidentiality concerns associated with controversy and rhetoric surrounding the previously proposed addition of a citizenship question. Research indicates that confidentiality concerns, compared to other participatory barriers, are especially hard to overcome. For example, internal Census Bureau research found that those who were concerned about privacy could have their attitudes moved on the use of administrative records, whereas those concerned about confidentiality could not.<sup>131</sup> Research on communications campaign best practices emphasize the importance of directly addressing barriers in messaging.<sup>132</sup> Yet, the Census Bureau has explicitly rejected recommendations of the National Advisory Committee that explicitly address the citizenship question in messaging.<sup>133</sup> Indeed, President’s Trump executive order instructing federal agencies to turn over data on citizenship to the Commerce Department could have the consequence of increasing public concerns over the use of administrative records in the census—a risk that the Census Bureau has long been concerned about.

Fourth, existing research also indicates that it is harder to move negative attitudes about census among Non-White individuals compared to White individuals. In the Bureau’s evaluation of census attitudes during the 2010 campaign, both Black individuals and White individuals saw a

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<sup>130</sup> U.S. Census Bureau, *Integrated Partnership and Communications Update Presentation to the National Advisory Committee* (April 27, 2017), <https://www2.census.gov/cac/nac/meetings/2017-04/2017-ipc-update.pdf>.

<sup>131</sup> Bates et al., *supra* n. 87.

<sup>132</sup> Thomas Backer, et al., *Designing Health Communication Campaigns: What works?*, Sage Publications (1992); Ronald E. Rice and Charles Atkins, *Public Communication Campaigns*, Sage Publications (2013); Susan L. Coyle, et al., *National Research Council: Evaluating AIDS Prevention programs*, Washington, DC: National Academy Press (1991).

<sup>133</sup> U.S. Census Bureau, Economics and Statistics Administration, *U.S. Census Bureau Responses to Census National Advisory Committee 2018 Fall Recommendations* (April 1, 2019), <https://www2.census.gov/cac/nac/meetings/2018-11/2019-04-01-census-response.pdf?#>.

decline in negative attitudes about the Census during the communications campaign, but the gap between the groups actually increased as White individuals had a steeper decline in negative attitudes.<sup>134</sup> A critical reason it is important to test outreach efforts is because of the well-recognized risk that a communication campaign can have the perverse consequence of widening disparities, if the messaging increases the cooperation of White individuals but has not effect on Non-White individuals.<sup>135</sup>

All of these factors point to the need to spend more on outreach activities in 2020 and, importantly, to do the research necessary to develop an effective messaging strategy following communication best practices. Indeed, one of the clearest lessons from the 2010 decennial was the need to evaluate the effectiveness of the outreach efforts.<sup>136</sup> In response, the Communications Directorate established a decades-long research plan to inform the 2020 Census communications campaign development and outlined plans for research in 2017, 2018 and 2019.

Notwithstanding all of the above, research and testing was scaled back or eliminated due to funding shortfalls. As just one example, a recent GAO report explained “[d]uring exchanges of information between the Bureau and its National Advisory Committee in 2017 and 2018, the Bureau proposed using additional focus groups with certain population groups, census interviewers, and trusted community messengers. These focus groups are intended to identify root causes and ways to overcome the confidentiality concerns increasingly being raised by respondents in the Bureau’s earlier testing by helping to inform messaging and outreach plans as well as staff support documents and training materials.”<sup>137</sup> The same report states that “[i]n technical comments in response to a draft of this report, Bureau officials told us that they do not have plans to conduct the additional proposed focus groups with census interviewers and trusted community messengers.”<sup>138</sup>

An internal Census Bureau document warned of damaging effects from decisions to underfund the Integrated Communications Campaign:<sup>139</sup>

“By missing the opportunity to test a full advertising campaign in the 2018 End-to-End Census Test, the advertising strategy for the 2020 Census would be untested and unproven on a population whose media consumption habits have changed dramatically since the last decennial census cycle. In addition to raising costs, the Census Bureau will also be unable to refine the communications strategy, which would lead to weakness in targeted advertising for specific hard-to-count

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<sup>134</sup> See *id.* at Table Es-5, 2010 CICPE.

<sup>135</sup> D. Sunshine Hillygus, et. al., *Hard Count: The Political and Social Challenges of Census Mobilization*, Russell Sage Foundation (2006).

<sup>136</sup> U.S. Census Bureau, *2020 Census Integrated Communications Plan*, version 1 (June 2, 2017), 77, [https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020\\_integrated\\_COM\\_plan.pdf](https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020_integrated_COM_plan.pdf).

<sup>137</sup> U.S. Government Accountability Office, *2020 Census: Actions Needed to Address Challenge to Enumerating Hard-to-Count Groups*, GAO-18-599 (July 26, 2018), 22, <https://www.gao.gov/products/GAO-18-599>.

<sup>138</sup> *Id.*

<sup>139</sup> U.S. Census Bureau, *Department Of Commerce FY2017 Budget Impact Paper*, Office Of Budget, (September 22, 2016).

population groups—again resulting in more costs for in-person visits and less accurate counts of these population groups...implementation of the partnership program and hiring of 19 partnership specialists will be delayed into FY2018, eroding the progress made in the 2010 Census for reaching these hard-to-count population groups and leading to increased costs and impacts to the quality of the 2020 Census. This includes delays in planning for the outreach to the limited English proficient and historically hard-to-count populations through the use of Complete Count Committees and local partnership events. **Together these delays will impact the program’s ability to maximize self-response and to accurately count these population groups**...One of the clear lessons learned from the 2010 Census was that earlier outreach would pay greater dividends in awareness and participation, in turn avoiding costly field work.”(emphasis added)

Another clear consequence of underfunding has been a reduction in the number of non-English languages covered in advertising, promotional, and instructional materials compared to 2010. In 2010, promotional materials were available in 28 languages, whereas only 12 non-English languages are planned for 2020. This decision seems especially puzzling for digital advertising, which can be narrowly targeted by language. Instead, the Bureau is relying on partners to do translations and material production. The Bureau had explicitly recognized the funding constraints that led to the shifting of certain tasks to stakeholders. “[U]nlike in 2010, there is not likely to be available funding for stakeholders to access in-kind dollars for materials production, which is another factor behind our plan to develop materials that stakeholders can customize and deploy themselves.”<sup>140</sup>

Further, one of the most significant consequences of underfunding has been to the partnership program, a key component of the Integrated Communications Campaign shown to be among the most effective at increasing cooperation among HTC groups.<sup>141</sup> The National Partnership Program engages organizations and trusted voices to support the 2020 Census and encourage their audiences to participate. Program staff educate and mobilize states, localities, and community-based organizations in support of the census. The Bureau considers “trusted messengers” to play a critical role in reaching and gaining the cooperation of hard-to-enumerate population groups.

Yet, the Bureau has reduced partnership staffing and delayed hiring, despite recommendations from 2010 that staff be hired earlier in the cycle. The 2020 Census Partnership Plan summarizes key lessons learned from 2010: “Planning should start before 2018 or 2 years before the decennial census; Funding was allocated too late to effectively plan and implement many program activities; Process for developing and reviewing materials and products was

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<sup>140</sup> U.S. Census Bureau, 2020 Integrated Communication Plan, Version 1 (June 2, 2017), 74. As a result of reductions in census outreach, partners are now spending more money to try to increase cooperation. The state of California, for instance, has allocated \$90 million for census outreach, whereas they spent only \$1 million in 2010.

<sup>141</sup> Bates, et al., *supra* n. 89; A. Rupa Datta, et al., 2010 Census Integrated Communications Program Evaluation (CICPE), 2010 Census Planning Memoranda Series No. 167 (March 15, 2012).



implemented too late, too complicated, and changed with the introduction of new products.”<sup>142</sup> Although the Census Bureau did start hiring partnership staff earlier than in 2010—they hired 5 partnership specialists in 2015—they have subsequently not hired as many staff nor hired them as early as recommended or planned.<sup>143</sup> Decisions about hiring numbers and staff locations have also been made “without the benefit of data on its actual hiring of partnership staff from the 2010 Census” and without clear evidence as to the optimal skill-sets, recruiting strategies, training, or outreach materials and activities.<sup>144</sup> Stakeholders have expressed frustration that the slow pace of hiring and on-boarding partnership staff has resulted in an “inability to obtain timely, accurate information about census operations from their regional census offices and partnership staff.”<sup>145</sup>

The spending on the partnership program staff has been reduced from \$334 million to \$248 million—a 26% decline.<sup>146</sup> The partnership specialists will be located out of the RCC rather than the ACOs, potentially reducing local connections and making it difficult to coordinate with local field operations.<sup>147</sup> In FY2010, it is estimated that the Bureau had combined staffing of 3,800 Partnership Specialists and Partnership Assistants; the target for 2020 is only 1,501 Partnership Specialists, even though stakeholders recommend at least 2,000. The Bureau has not even met its own targets.<sup>148</sup> As of April 17, 2019, the Bureau has hired 467 partnership specialists, and another

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<sup>142</sup> 2020 Census Partnership Plan, *The 2020 Census Integrated Communications Plan*, version 1, (June 2, 2017), 9 similarly recognized that “[m]ajor national partnership initiatives must begin years in advance.” *Id.* at 11.

<sup>143</sup> U.S. Government Accountability Office, *2020 Census: Actions Needed to Address Challenges to Enumerating Hard-To-Count Groups*, GAO 18-599 (July 2018), <https://www.gao.gov/assets/700/693450.pdf>.

<sup>144</sup> *Id.* at 24–25. For recommendations, see *2010 Census Evaluation of National Partnership Research Report*, 2010 Census Planning Memoranda Series, No. 196 (May 29, 2012).

<sup>145</sup> *Don't Short Change the 2020 Census The Census Bureau Must Spend Available Resources Now*, The Census Project (April 29, 2019), <https://censusproject.files.wordpress.com/2019/04/census-project-and-lcchr-letter-to-house-re.-fy-19-spending-4-30.pdf>

<sup>146</sup> 2010 numbers from U.S. Government Accountability Office, *2010 Census Key Efforts to Include Hard-to-Count Populations Went Generally as Planned; Improvements Could Make the Efforts More Effective for Next Census*, US Government Accountability Office (December 2010), <https://www.gao.gov/new.items/d1145.pdf>. Note that using the CBO's estimates of the GDP deflator for FY2010 and FY2020 puts the numbers at \$352.6 million and \$250 million respectively.

<sup>147</sup> U.S. Census Bureau, *2020 Census Detailed Operational Plan for: 18. Nonresponse Followup Operation (NRFU)*, U.S. Census Bureau, 34 (April 16, 2018), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/NRFU-detailed-operational-plan.pdf>. The Census Bureau has failed to follow recommendations of an OIG report calling for greater coordination between the ACOs and partnership specialists. See *2010 Census: Cooperation Between Partnership Staff and Local Census Office Managers Challenged by Communication and Coordination Problems, Final Report OIG-11-023-I*, Office of Audit and Evaluation (April 8, 2011), <https://www.oig.doc.gov/OIGPublications/OIG-11-023-I.pdf>.

<sup>148</sup> *Don't Short Change the 2020 Census The Census Bureau Must Spend Available Resources Now*, *The Census Project* (April 29, 2019), <https://censusproject.files.wordpress.com/2019/04/census-project-and-lcchr-letter-to-house-re.-fy-19-spending-4-30.pdf>. Although the Census Bureau has touted an increase in the number of Partnership Specialists in 2020 compared to 2010, the overall partnership staff numbers are far lower and have not been driven by evidence-based decision making.

329 applicants are waiting to have their background checks completed.<sup>149</sup> A July 2019 GAO report similarly reported that the Census Bureau had failed to meet its May 2019 hiring goal.<sup>150</sup> This suggests that the Census Bureau is failing to follow Congressional directive to spend FY2019 budget on priority activities that “maximize self-response to the 2020 Census,” including increasing partnership program staff, expanding targeted communications activities, and opening local Questionnaire Assistance Centers in hard-to-count communities.”<sup>151</sup>

Evaluations of the partnership program in 2010 found it to be effective at increasing the self-response of HTC households. An aggregate-level analysis found that HTC census tracts with more partners saw a significant increase in the 2010 Census mailback rate compared to the 2000 Census mailback rate—having 3-4 partners in a tract increased the mailback rate by half a percentage point.<sup>152</sup> An independent evaluation of the 2010 Integrated Communication Program by the National Opinion Research Center (NORC) found that partnership contact was one of the strongest predictors of mail response rate for Black individuals in 2010.<sup>153</sup> Black individuals who reported exposure to the partnership program were twice as likely to mail return their census form compared to those not exposed.<sup>154</sup>

The NORC analysis allows an estimation of the predicted effect of reducing the partnership budget and staff on the self-response rate of the Black population. My analysis uses the actual total partnership spending in 2010 combined with the estimated contact rate and estimated contact effect for Black respondents in the NORC analysis.<sup>155</sup> Based on these assumptions, the average cost to

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<sup>149</sup> U.S. Government Accountability Office, Statement of Robert Goldenkoff and Nick Marinos, Testimony Before the Subcommittee on Commerce, Justice, Science, and Related Agencies, Committee on Appropriations, House of Representatives, *2020 Census: Further Actions Needed to Reduce Key Risks to a Successful Enumeration*, GAO-19-431T (April 30, 2019). According to the May 2019 monthly status report, 579 partnership specialists have been hired, and 544 are in process. U.S. Census Bureau, *2020 Census Program Monthly Status Report* (May 2019), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/monthly-status-reports/2019-05-msr.pdf>.

<sup>150</sup> The May 2019 goal was to have hired 1,181 partnership specialists, but only 813 had been hired by June 22. U.S. Government Accountability Office, *2020 CENSUS: Bureau Is Making Progress Opening Offices and Recruiting, but Could Improve Its Ability to Evaluate Training*, GAO 19-602 (July 2019).

<sup>151</sup> The FY2019 Appropriations Committee report explicitly required the Bureau to enhance its communications, partnership, and assistance efforts. It required the Bureau to conduct communications activities commensurate with those conducted in 2009, increased partnership program staff, and required establishment of Census questionnaire assistance centers (QACs).

<sup>152</sup> *2010 Census Evaluation of National Partnership Research Report*, 2010 Census Planning Memoranda Series, No. 196 (May 29, 2012).

<sup>153</sup> A. Rupa Datta, et al., *2010 Census Integrated Communications Program Evaluation (CICPE)*, 2010 Census Planning Memoranda Series No. 167 (March 15, 2012).

<sup>154</sup> *Id.* at table ES-8, xxii. The estimate comes from a logistic regression model predicting mail return prior to NRFU, estimated separately for each race or ethnic group. The model controls for all measured types of exposure. For a discussion of the limitations of correlational analysis using self-reported exposure measures, *see* pages xiii-xiv. Although a stronger research design would rely on an RCT in which a control group received none of the communications, such an approach is not practical in the setting of an actual census and the available data were viewed as inadequate to the task.

<sup>155</sup> Among Black respondents to the NORC study, 45.2% mailed back their census form before April 18, the start of NRFU operations, compared to 67.1% of White respondents; 74.6% of Black respondents were enumerated through self-response or an enumerator (without use of a proxy or imputation)—the number on which I base my analysis since the partnership contacts could also increase cooperation with enumerators



mobilize each additional member of the Black population using the partnership program was roughly \$14.00 in 2010. Using this average cost estimate together with the planned budget reduction for 2020 estimates a predicted reduction in the Black self-response rate of approximately 7 percentage points. If I instead estimate a project of the effect of the planned reduction of partnership staff in 2020 compared to 2010—assuming each partnership staff person contributed equally to the partnership contact rate—the predicted reduction in the Black self-response rate is 11 percentage points. Because the NORC study found no relationship between partnership contact and self-response for White respondents, these predicted effects translate into a worsened *differential* self-response rate.

In sum, although the Census Bureau is relying on the communications campaign to mobilize hard to count households, all evidence points to it failing to close the expected gap in differential undercount. Indeed, some evidence suggests the campaign could exacerbate the gap if the messaging is more likely to reach and mobilize White households. Moreover, reductions in the number of partnership staff can be expected to further reduce the self-response of Black households.

## 2. Field Staff and Infrastructure

In 2010, the Bureau established 12 Regional Census Centers (RCCs) and nearly 500 Area Census Offices (ACOs). In contrast, the new design for the 2020 Census field operations includes just 6 RCCs and 248 ACOS. The ACOs will house the managers, staff, materials, and equipment needed to support enumerators. This design change has been driven by cost rather than quality considerations, and evidence suggests that it is a decision that could worsen the differential undercount. In 2011, Census Director Robert Groves talked about the closure of 6 of 12 regional as ones made “in anticipation of spending limits.”<sup>156</sup> In 2010, office locations were based on projected NRFU workload and placement of at least one office in each congressional district. A 2018 OIG report concluded that the agency used “poorly defined criterion” and unreliable workload estimates in determining the location of ACOs for 2020. Operational plans claim criterion such as response rate projections, anticipated NRFU workload, optimal number of census takers per office, and field workload; yet, the number and locations of ACOs did not change when the projected number of enumerators more than doubled in response to anticipated reductions in the projected self-response rate. Rather than opening up an additional 101 offices on the basis of the original decision rule, the Bureau decided to increase the average number of core enumerators per office to 1,034 (a 41 percent increase). Moreover, the Bureau has experienced problems and

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(and NORC analysis was estimated using the Wave 3 measure of exposure). In wave 1, just 17% of Black respondents reported partnership exposure and that increased to 58% by wave 3. Based on the estimated effect in table ES-8 and exposure rates reported in table 4-3, the NORC results suggest those exposed to the partnership program were 26 percentage points more likely to cooperate. Projecting the estimates from the NORC study to the estimated Black population in 2010 implies that only 47.2% of the Black population would have been enumerated through self-response or an enumerator if not for the partnership program activities.

<sup>156</sup> Robert Groves, *The Consequences of Budget Cuts*, U.S. Census Bureau Census Blogs (July 15, 2011), <https://www.census.gov/newsroom/blogs/director/2011/07/the-consequences-of-budget-cuts.html>

delays in opening the ACOs so much so that 111 of the 248 (45%) have required deviations from ACO location requirements.<sup>157</sup>

The Census Bureau has also increased the staff to supervisor ratio from 1:8 in 2010 to 1:20—an even greater increase than the 1:15 ratio planned before the 2016 Census Test—and despite concerns by the OIG and GAO regarding an observed failure to adequately manage staffing, such as removing unproductive or poor-performing enumerators.<sup>158</sup> Indeed, given limitations in the Census test design and methodology, the OIG concluded that “[t]he Bureau’s inability to isolate the effect of each enumerator-to-supervisor ratio on NRFU performance (e.g., measures of cost, quality, and completion rate) means that the Bureau is unable to determine the optimal enumerator-to-supervisor staffing ratio” and called the Census Bureau’s claim that the 2015 Census Test staff ratio of 1:15 being “sufficient” was a misstatement given the evidence.<sup>159</sup>

The location of the ACO for Prince George’s County illustrates the potentially problematic implications of this change. In 2010, Prince George’s County had an ACO located within the county, in Largo, Maryland, with 1,681 positions.<sup>160</sup> In contrast, the 2020 plans include Prince George’s County in the Hanover, MD ACO area—located well outside Prince George’s County.<sup>161</sup> This despite the fact that most of the population of Prince George’s County will be geographically closer to the Washington, DC ACO office. The Bureau decision to increase the number of field staff at offices rather than increasing the number of ACOs and locating ACOs within HTC communities is more likely to have an impact on Prince George’s County given the expected increase in the differential self-response of Non-White individuals. The 2010 Census estimated Prince George’s County to be 15% Non-Hispanic White; 2017 American Community Survey estimates estimate the White population has shrank to 13.3% of the county population. In contrast, the county of Hanover, Maryland is majority White.

Estimates of the number of enumerators required have varied over the course of the decade based on anticipated self-response rates and the assumed workload productivity of NRFU field staff. In 2010, 635,000 census takers were hired to conduct NRFU activities and they had a productivity rate of 1.25 households enumerated per hour.<sup>162</sup> Despite a larger population, more

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<sup>157</sup> GAO-19-602, p. 9.

<sup>158</sup> *2020 Census: 2016 Census Test Indicates the Current Life-Cycle Cost Estimate is Incomplete and Underestimates Nonresponse Followup Costs* FINAL REPORT NO. OIG-17-020-I (March 16, 2017); 2020 Census: Additional Actions Could Strengthen Field Data Collection Efforts, GAO-17-191, (January 26, 2017). Staff ratios reported in 2020 Census Operational Plan Executive Summary V. 1, 16 and 2020 Census Operational Plan, V. 4, 129.

<sup>159</sup> OIG-17-020-I, 7, 11.

<sup>160</sup> Positions do not necessarily equal enumerators since one person can cover more than one position. See David Katzoff, LCO by LCO Number of Positions (April 16, 2018), [https://www.censushardtocountmaps2020.us/img/acolco/LCO%20by%20LCO%20and%20State%20by%20State%20Estimated%20Number%20of%20FY%2010%20Positions%20\(For%20Release\).pdf](https://www.censushardtocountmaps2020.us/img/acolco/LCO%20by%20LCO%20and%20State%20by%20State%20Estimated%20Number%20of%20FY%2010%20Positions%20(For%20Release).pdf)

<sup>161</sup> See Initial Locations of 2020 Area Census Offices, [https://www2.census.gov/programs-surveys/decennial/2020/program-management/memo-series/2020-memo-2017\\_21\\_ACO\\_list.pdf](https://www2.census.gov/programs-surveys/decennial/2020/program-management/memo-series/2020-memo-2017_21_ACO_list.pdf).

<sup>162</sup> [https://www.census.gov/history/www/faqs/agency\\_history\\_faqs/how\\_many\\_census\\_takers\\_are\\_needed\\_to\\_conduct\\_the\\_census.html](https://www.census.gov/history/www/faqs/agency_history_faqs/how_many_census_takers_are_needed_to_conduct_the_census.html). I would note that the Census Bureau identifies very different numbers of 2010 field enumerators in different documents: 711,362 staff for NRFU operations is mentioned in [https://www.census.gov/content/dam/Census/library/publications/2011/dec/2010\\_cpex\\_155.pdf](https://www.census.gov/content/dam/Census/library/publications/2011/dec/2010_cpex_155.pdf), whereas

hard-to-count households, and an anticipated lower self-response rate, the Census Bureau is budgeting for fewer enumerators with an assumed higher productivity rate. Projections for 2020 have varied over the decade, but rest on unreliable assumptions. A 2017 cost update assumed increased workloads related to an expected decline in self-response rate, but included “reduced pay rates for field data collection staff” and “reductions in the length of staff engagement,”<sup>163</sup>—questionable assumptions given current unemployment levels compared to 2010 and likely increases in the NRFU workload. A 2018 GAO report notes that “In early hiring for 2020, Bureau officials reported smaller than expected applicant pools, declined offers, and turnover.”<sup>164</sup> According to the most recent monthly status update (April) there continue to be delays in the set-up of ACOs and the hiring of staff.<sup>165</sup> For example, a July 2019 GAO report has found massive delays in the processing of background checks of applicants—“a growing backlog of clearances for which the Bureau did not have the resources to clear.”<sup>166</sup> Further, because online training requires a personal home computer and internet access to complete training, it is creating barriers to training.<sup>167</sup>

[REDACTED]

[REDACTED]

[REDACTED]<sup>168</sup> Given that the self-response expectation of 60.5% for 2020 is not rooted in tests over the course of the decade and was instead last updated in 2017 (prior to much of the evidence pointing to a larger differential self-response rate between White and Non-White households outlined in this report), there is considerable reason to consider this a significant risk to the 2020 count. The Census Bureau acknowledges “If the 2020 Census self-response rate falls below expectations, then the initial NRFU workload will be higher than expected, and the infrastructure may be insufficient to support the increased field data collection volume.”<sup>169</sup> Although the Census Bureau did not update their assumptions about the expected self-response rate after observing a large differential between White and Non-White populations in the 2018 Census Test, they did increase their assumed productivity rates. There are a number of reasons to think that the improved productivity rates observed in Providence County between 2010 and 2018 will not hold for the entire country. Providence County is a majority White county with high rates of Internet access and historically high levels of Census cooperation. The Providence County 2010 census self-response rate was 75.2%—far exceeding the national

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the 2020 operational plan only says they hired “more than 516,000 enumerators to conduct NRFU activities.”

<sup>163</sup> GAO-18-635.

<sup>164</sup> *Actions Needed to Address Challenge to Enumerating Hard-to-Count Groups*, GAO-18-599, U.S. Government Accountability Office (July 2018), <https://www.gao.gov/assets/700/693450.pdf>.

<sup>165</sup> *2020 Census Program Monthly Status Report*, U.S. Census Bureau (April 2019), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/monthly-status-reports/2019-04-msr.pdf>.

<sup>166</sup> GAO-19-602, p. 21. The Census Bureau has responded by hiring additional staff to help process the backlog, but concerns remain.

<sup>167</sup> GAO-19-602, 27. The Bureau is creating plans to offer alternative training locations for address canvassing listers, but these plans have not been finalized as of July 2019. We might further expect the problem to matter not only for the hiring of listers, but also the hiring of enumerators—with potential implications for type of individual who is hired.

<sup>168</sup> [REDACTED]

<sup>169</sup> 2020 Census Operational Plan. Version 4, 131.

average of 63.5%. According to the 2017 ACS, Providence County is 62% Non-Hispanic White, 12% Black, and 22% Hispanic. The political and social environment in Providence County is also relevant. We might expect, for instance, that racial and ethnic minorities are less fearful of cooperating with government workers given Providence Mayor Jorge O. Elorza, the son of Guatemalan immigrants who settled in Providence, labeling of Providence as a “sanctuary city”<sup>170</sup> and Rhode Island Governor Lincoln Chaffee actions limiting federal immigration enforcement.<sup>171</sup>

The consequences of under-staffing and reduced field presence will again be most acutely felt by the count of racial and ethnic minorities because these households will be more likely to be omitted from MAF without in-field address canvassing and, for those included in the MAF, less likely to self-respond and thus more likely to be included in the NRFU operation. In a 2017 Budget Impact report, the Census Bureau acknowledged that “[t]he field office infrastructure cut will lead to delays in opening offices in 2018 and 2019, directly increasing the risk of operational problems and reduced field efficiency.”<sup>172</sup> The concern was so significant that 54 members of Congress sent a letter to Secretary Ross expressing “significant concern” that “the decision to dramatically reduce the Bureau’s field presence, will disproportionately underrepresent rural, low-income, and minority communities.”<sup>173</sup> Given the likely geographic distribution of omissions from MAF and expected declines in self-response, it could have severe implications for field operations.<sup>174</sup> As explained in an OIG report, “if the field infrastructure is not sufficient to support the work for the 2020 Census, then there is significant risk of not effectively managing the associated field workload, which could impact cost and data quality.”<sup>175</sup>

The Census Bureau has historically tried to match background and language of the enumerator to a neighborhood given well-established findings in survey methodology literature that interviewer characteristics shape the willingness of individuals to respond and to respond accurately.<sup>176</sup> These staffing and infrastructure challenges are making it more difficult to achieve background matches between enumerators and census neighborhoods. A recent GAO reports indicates that the Bureau is having a difficult time recruiting staff with needed language skills and notes that language barriers could make it more difficult to count limited-English households given

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<sup>170</sup> Scott Blake, *Elorza: We are a Sanctuary City*, Providence Business News (August 31, 2018), <https://pbn.com/elorza-we-are-a-sanctuary-city/>.

<sup>171</sup> In 2011, he issued Executive Order 11-02 that rescinded the requirement to e-verify employment eligibility with the federal government. In July 2014, he issued a Department of Corrections Policy directing executive agencies not to honor an ICE detainee without a warrant.

<sup>172</sup> U.S. Census Bureau, *Department Of Commerce FY2017 Budget Impact Paper*, Michael Anderson, Office Of Budget (September 22, 2016).

<sup>173</sup> Letter to Congressman Wilbur L. Ross, Jr., US Congress (January 16, 2019), [https://panetta.house.gov/sites/panetta.house.gov/files/documents/2019.01.16\\_CongressmanPaneta\\_Letter\\_CommerceDept\\_AreaCensusOffices.pdf](https://panetta.house.gov/sites/panetta.house.gov/files/documents/2019.01.16_CongressmanPaneta_Letter_CommerceDept_AreaCensusOffices.pdf).

<sup>174</sup> Using the original ratio of 735 enumerators per office would result in 349 ACOs. However, rather than opening an additional 101 offices, the Bureau is increasing the average number of core enumerators per office to 1,034 (a 41 percent increase). Kissam et al. (2018) highlight the consequences of uneven LUCA participation and inadequately targeted in-field address canvassing for likely omissions from MAF.

<sup>175</sup> Final Report No. OIG-18-018-A, 6.

<sup>176</sup> Thomas Mangione et al., *Question Characteristics And Interviewer Effects*, Journal Of Official Statistics-Stockholm- 8, 293–293 (1992).

different “levels of comfort with government involvement.”<sup>177</sup> The absence of records and analysis regarding the 2010 NRFU suggest that the Bureau is unprepared for this problem if it arises.<sup>178</sup> In 2010, the Census Bureau hired 3,487 noncitizens as enumerators in order to provide certain foreign language skills for which a qualified citizen was not available.<sup>179</sup> The Census Bureau has not explained how, for the 2020 Census, it will address similar circumstances where there is a need for foreign language skills, but insufficient citizen enumerators available to provide the necessary skills. These concerns are even more pronounced given the tighter labor market today compared to 2010.

In sum, staffing and infrastructure plans rest on assumptions that have not been sufficiently tested. Worse still, the current estimates have not been updated to account for the expected increase in nonresponse caused by the increased reluctance of racial and ethnic minorities to respond. As the Census Bureau acknowledges, this reduced local presence creates a major risk for the 2020 count if self-response rates decline below assumed and modeled levels or a cybersecurity or other event decreases the public’s willingness to respond online.

### 3. Questionnaire Assistance Centers

For numerous reasons, including the issues identified above with MAF, it is all the more important during the 2020 Census to provide resources for a voluntary “backstop” for those households not listed in the MAF (that will therefore not receive a mailing). In 2010, households excluded from the MAF could nonetheless complete a census form at one of 29,157 staffed Questionnaire Assistance Center (QAC) sites or 9,670 unstaffed Be Counted (BC) sites.<sup>180</sup> The QAC/BC sites provided a means for persons to be included in the count even if they did not receive a census questionnaire, believed they were omitted from a form, or had no usual address on Census Day. These sites were typically established in community organizations, libraries, and local government offices in HTC areas. A similar “Be Counted” program existed in the 2000 Census with 28,136 sites.

Funding for these centers has been completely eliminated from the 2020 Census.<sup>181</sup> The impact of the Census Bureau’s change is likely to be significant. In 2010, 784,103 questionnaires were submitted (2.8 million forms were picked up by the public) from QAC/BC locations; the

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<sup>177</sup> GAO-19-602, p. 24.

<sup>178</sup> *Id.*

<sup>179</sup> *2010 Census Recruiting and Hiring Assessment Report*, U.S. Census Bureau (November 2, 2011), [https://www.census.gov/2010census/pdf/2010\\_Census\\_Recruiting\\_Hiring\\_Assessment.pdf](https://www.census.gov/2010census/pdf/2010_Census_Recruiting_Hiring_Assessment.pdf)

<sup>180</sup> QACs employed a temporary census worker at the site for 15 hours per week to assist respondents in completing their forms, where the BC sites did not have a census employee. Forms were available in 6 languages. The total operational spending was \$35,574,131 and 31,055 temporary employees worked on the operation—not including partnership staff. U.S. Census Bureau, *2010 Census Be Counted and Questionnaire Assistance Centers Assessment* (May 22, 2012), <https://www2.census.gov/programs-surveys/decennial/2010/program-management/5-review/cpex/2010-memo-194.pdf>.

<sup>181</sup> In 2020, the Census Bureau has only planned for questionnaire assistance to be available by telephone. U.S. Census Bureau, *2020 Census Operational Plan: A New Design for the 21st Century*, v. 4 (December 2018), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan4.pdf>.



Census Bureau reports that 760,748 people were added to the census count.<sup>182</sup> This was a nearly 36% increase compared to 2000, when 560,880 persons were added to the census. Although not all of the forms represent households omitted from MAF, 38% of those who visited the QAC in 2010 said they did not receive a questionnaire in the mail (41% in Puerto Rico), suggesting these centers were an effective way for people omitted from MAF to be counted.<sup>183</sup> Assuming that QACs in 2020 could have seen a similar 36% increase, this design change means a loss in the self-response of more than one million HTC individuals.

In 2020, the Census Bureau has only planned for questionnaire assistance to be available by telephone.<sup>184</sup> Telephone is an inadequate substitute for brick and mortar locations. To utilize the telephone questionnaire assistance, one needs to know the phone number to call. Based on evaluations of the 2010 QAC, only 5.2% of people said they learned about the QAC from TV/internet and only 7.8% saw on a poster; rather, the vast majority of people (65%) simply encountered the site in person. Moreover, the in-person assistance and resources that were available at the brick and mortar QACs are likely to be more effective than remote assistance through the telephone. Due to their reductions in testing, the Census Bureau has little available data to establish that this significant change will not adversely impact HTC communities. The Census is hoping that libraries might make available a dedicated computer terminal for the 2020 count—but there are likely to be disparities in which communities do this and this still offers less guidance than a staffed QAC; this is yet another example of the Census Bureau shifting the responsibility of an accurate count to local communities and partners.

Stakeholders have lobbied for revival of QACs. In 2019, the Census Bureau provided a report to the Appropriations Committees outlining a last-minute plan that “in lieu of establishing community-based QACs,” it will implement a “Mobile Response Initiative” in HTC communities where Census staff “will be present at markets, festivals, and other high-traffic events in hard-to-count communities.”<sup>185</sup> This plan is unclear, untested, and based on the available evidence, unlikely to be effective. Based on the Census Bureau’s evaluation of QACs, visits peaked in the middle of the week—on Wednesdays and on Census Day, a Thursday. In contrast, festivals tend to be held on weekends and must compete for attention from many different organizations and vendors.

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<sup>182</sup> U.S. Census Bureau, *2010 Census Be Counted and Questionnaire Assistance Centers Assessment*, 2010 Census Planning Memo No. 194, xiii (May 22, 2012).

<sup>183</sup> *Id.* Table 41 reports that 70,173 addresses were added to MAF from the QACs after field verification.

<sup>184</sup> U.S. Census Bureau, *2020 Census Operational Plan: A New Design for the 21st Century*, v. 4. (December 2018), <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan4.pdf>.

<sup>185</sup> *The Community Speaks: A Report of the National Latino Commission on Census 2020*, NALEO Education Fund, 17 (May 2019), [https://d3n8a8pro7vnm.cloudfront.net/naleo/pages/1489/attachments/original/1558496505/1.TheCommunitySpeaks-Report\\_1.pdf](https://d3n8a8pro7vnm.cloudfront.net/naleo/pages/1489/attachments/original/1558496505/1.TheCommunitySpeaks-Report_1.pdf); see Report to the Committee on Commerce, Justice, Science and Related Agencies, Appropriations Bill, 116<sup>th</sup> Congress, 1<sup>st</sup> sess. (2019-2020), <https://docs.house.gov/meetings/AP/AP00/20190522/109552/HMKP-116-AP00-20190522-SD002.pdf>. The House has proposed adding \$100 million in funding for this initiative.



While the QACs are a clear example of a Census Bureau decision that seems likely to negatively impact the undercount of hard to count communities, the problems more broadly highlight the need for the Census Bureau to do additional outreach beyond mailings to the MAF.

## VII. Effects

As detailed in the evidence reviewed in this report, it is my opinion that underfunding of the 2020 Census will unreasonably exacerbate the undercount of racial and ethnic minorities compared to the Non-Hispanic White population. Motivated by cost savings, the Census Bureau made a number of changes to their methodology and processes, despite available evidence indicating these changes could worsen the undercount of HTC households and without adequate research and planning to mitigate that possibility.

The effects of these decisions are cumulative and often difficult to quantify precisely given available data, but the following quantifiable estimates, detailed further above, are the basis for my conservative estimate that the differential undercount of Black individuals is likely to worsen by *at least* two percentage points:

- A predicted reduction in Black self-response associated with a reduction in the funding and staffing of the partnership program of 7-11 percentage points.
- The elimination of Questionnaire Assistance Centers/Be Counted forms could result in the loss of the self-response of more than one million individuals in HTC communities, including Black communities.
- An attitudinal gap between Black and White respondents showing Black respondents were 14 percentage points more likely than White respondents to be Extremely/Very concerned that the Census Bureau will not keep answers to the 2020 Census confidential and 19 percentage points more likely to be Very/Extremely concerned that their answers to the 2020 Census would be used against them.
- Although it appears that the 2020 Census will not include a citizenship question—which the Census Bureau predicted would decrease the self-response of non-citizen households by 8 percentage points—the controversy and rhetoric is likely to impact the cooperation of non-citizen, Hispanic, and other Non-White households.
- An expectation that the predicted differential self-response between White individuals and Non-White individuals will translate into a differential undercount because the NRFU operations historically have never been able to fully mitigated differential self-response rates and because enumeration by proxy respondents and imputation systematically undercounts Black and Hispanic household size.

- The Urban Institute’s projection that Black individuals will have an undercount of 3.24% and Hispanic individuals will have an undercount of 2.84% *even if the citizenship question is not included*. Former Census Director John Thompson further says that these estimates “may be a little bit on the conservative side” and concludes that “It could be as bad as 1990. It could be worse.”<sup>186</sup>
- Finally, the less quantifiable, but clearly disparate effects of other funding, design, and resource decisions, such as the use of internet self-response, in-office canvassing, and administrative records, coupled with key resource cuts, such as to field staff, field offices, and outreach.

**I declare under penalty of perjury that the foregoing is true and correct.**



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Sunshine Hillygus

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<sup>186</sup> Hansi Lo Wang, *Census Could Lead to the Worst Undercount of Black, Latinx People in 30 Years*, NPR (June 4, 2019), <https://www.npr.org/2019/06/04/728034176/2020-census-could-lead-to-worst-undercount-of-black-latinx-people-in-30-years>.

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- Zachary H. Seeskin and Bruce D. Spencer, *Working Paper: Balancing 2020 Census Cost and Accuracy: Consequences for Congressional Apportionment and Fund Allocations*, Northwestern University, Institute for Policy Research (2018).

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- 2015 Census Test: Advertising and Partnerships Savannah DMA National Advisory Committee Monica Vines, Researcher (October 8, 2015).
- Benjamin Taylor Deposition (July 12, 2019).
- Testimony of Census Bureau Director John H. Thompson, in U.S. Congress, Senate Committee on Homeland Security and Governmental Affairs, 2020 Census: Challenges Facing the Bureau for a Modern, Cost-Effective Survey, hearing, 114th Cong., 1st sess., 1 (April 20, 2015), <http://www.hsgac.senate.gov/hearings/2020-census-challenges-facing-the-bureau-for-a-modern-cost-effective-survey>.
- Testimony of then-Census Bureau Director John H. Thompson, before the House Committee on Government Oversight and Reform, Subcommittee on Government Operations and Subcommittee on Information Technology, Preparing for the 2020 Census: Will the Technology Be Ready?, 114th Cong., 1st Sess., 2 (November 3, 2015), <https://oversight.house.gov/hearing/preparing-for-the-2020-census-will-the-technology-be-ready/>.
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- William P. O'Hare, *Differential Undercounts in the U.S. Census Who is Missed* (2019).

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**ACADEMIC APPOINTMENT**

Duke University  
Professor of Political Science, July 2015-  
Professor of Public Policy (by courtesy), Nov 2015-  
Associate Professor of Political Science, July 2009-2015  
Director, Duke Initiative on Survey Methodology, July 2010-

Harvard University  
Frederick S. Danziger Associate Professor of Government, July 2007-June 2009  
Director, Program on Survey Research, July 2005-June 2009  
Assistant Professor of Government, July 2003-June 2007

**EDUCATION**

Stanford University  
Ph.D., Political Science, 2003  
M.A., Political Science, 2000  
Dissertation: Understanding Receptivity to Political Campaigns: Three Essays on Voter Decision Making in Election 2000.  
Committee: Morris Fiorina (chair), Norman Nie, Simon Jackman, David Brady  
  
University of Arkansas  
M.A., Political Science, May 1998  
B.A., Political Science and B.A., Spanish, *Summa Cum Laude*, May 1996

**BOOKS**

Holbein, J. and D.S. Hillygus. *Making Young Voters: Converting Civic Attitudes into Civic Action*. Cambridge University Press, forthcoming.

Hillygus, D.S. and T. Shields. *The Persuadable Voter: Wedge Issues in Presidential Campaigns*. Princeton University Press, 2008. Paperback, 2009.

**Winner of the 2009 Robert E. Lane Award.**

Excerpt reprinted in *Controversies in Voting Behavior*, 5th ed. R. Niemi, H. Weisberg and D. Kimball, eds. DC: Congressional Quarterly, 2011.

Hillygus, D.S., N. Nie, K. Prewitt, and H. Pals. *The Hard Count: The Political and Social Challenges of Census Mobilization*. Russell Sage Foundation, 2006.

**JOURNAL PUBLICATIONS**

Madson, G. and D.S. Hillygus. 2019. "Who Trusts the Polls? Motivated Reasoning in Evaluations of Polling Results," *Political Behavior*.

Carlson, C., V. Dounoucos, and D.S. Hillygus. 2019. "The Message and the Medium: The Communication Effects of Twitter Commentary," *Journal of Information Technology & Politics*.



Holbein, J., D.S. Hillygus, C. Gibson-Davis, M. Lenard, and D. Hill. 2018. "The Development of Students' Engagement in School, Community, and Democracy," *British Journal of Political Science*

Hillygus, D.S. 2018. "Navigating Scholarly Exchange in Today's Media Environment," *Journal of Politics* 80(3), 1064-1068(editor-reviewed).

Xing, Z. D.S. Hillygus and L. Carin. 2017. "Evaluating U.S. Electoral Representation with a Joint Statistical Model of Congressional Roll-Calls, Legislative Text, and Voter Registration Data," *Proceedings of the 23rd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 1205-1214.

Knutson, K, J. Phelan, M. Paskow, A. Roach, K. Whiton, G. Langer; D.S. Hillygus, M. Mokrzycki, W.A. Broughton, S. Chokroverty, K.L. Lichstein, M. Hirshkowitz. 2017. "The National Sleep Foundation's Sleep Health Index," *Sleep Health* 3 (4): 234-40.

DeYoreo, M., Reiter, J. and D.S. Hillygus. 2017. "Nonparametric Bayesian Models With Focused Clustering for Mixed Ordinal and Nominal Data," *Bayesian Analysis*.

Hillygus, D.S., McKee, S., and M. Young. 2017. "Reversal of Fortune: The Political Behavior of White Migrants to the South," *Presidential Studies Quarterly*.

Henderson, M. and D.S. Hillygus. 2016. "Contextual Factors in Time of Decision in the 2008 Presidential Election," *Public Opinion Quarterly*.

Holbein, J. and D.S. Hillygus. 2016. "Making Young Voters: The Impact of Preregistration on Youth Turnout," *American Journal of Political Science*.

Ballard, A., D.S. Hillygus, and T. Konitzer. 2016. "Campaigning Online: Web Display Ads in the 2012 Presidential Campaign," *PS: Political Science & Politics*.

Si, Y., J. Reiter, and D.S. Hillygus. 2016. "Bayesian Latent Pattern Mixture Models For Handling Attrition In Panel Studies With Refreshment Samples," *Annals of Applied Statistics*.

Schifeling, T. C. Cheng, J. Reiter and D.S. Hillygus. 2015. "Accounting for Nonignorable Unit Nonresponse and Attrition in Panel Studies with Refreshment Samples," *Journal of Survey Statistics and Methodology*.

Gerber, A., K. Arceneaux, C. Boudreau, C. Dowling, and D.S. Hillygus. 2015. "Reporting Balance Tables, Response Rates and Manipulation Checks in Experimental Research: A Reply from the Committee that Prepared the Reporting Guidelines," *Journal of Experimental Political Science*.

Johnston, C., D.S. Hillygus, and B. Bartels. 2014. "Ideology, The Affordable Care Act Ruling, and Supreme Court Legitimacy," *Public Opinion Quarterly*, 78 (4): 963-973.

Gerber, A., K. Arceneaux, C. Boudreau, C. Dowling, D.S. Hillygus, T. Palfrey, D. Biggers, D. Hendry. 2014. "Reporting Guidelines for Experimental Research: A



Report from the Experimental Research Section Standards Committee,” *Journal of Experimental Political Science*, 1(1): 81-98.

Si, Y., J. Reiter and D.S. Hillygus. 2014. “Semi-parametric Selection Models for Potentially Non-ignorable Attrition in Panel Studies with Refreshment Samples,” *Political Analysis*, 23(1): 92-112.

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Aldrich, J., B. Bishop, R. Hatch, D.S. Hillygus, and D. Rohde. 2013. “Blame, Responsibility, and the Tea Party in the 2010 Midterm Elections,” *Political Behavior*, 36(3), 471-491.

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Hillygus, D.S. 2011. “The Evolution of Election Polling in the United States,” *Public Opinion Quarterly*, 75(5): 962-981.

Henderson, M. and D.S. Hillygus. 2011. “The Dynamics of Health Care Opinion, 2008-2010: Partisanship, Self-Interest, and Racial Resentment,” *Journal of Health Politics, Policy, and Law*, 36(6): 945-960.

Henderson, M., D.S. Hillygus, and T. Thompson. 2010. “‘Sour Grapes’ or Rational Voting? Voter Decision Making Among Thwarted Primary Voters in 2008,” *Public Opinion Quarterly*, 74(3): 499-529.

Ellis, R., D.S. Hillygus and N. Nie. 2010. “Retrospective and Prospective Candidate Evaluations and the Dynamics of Vote Choice in 2008,” *Electoral Studies* 29(4): 582-593.

Hillygus, D.S. and M. Henderson. 2010. “Policy Issues and the Dynamics of Vote Choice in the 2008 Presidential Election,” *Journal of Elections, Public Opinion, and Parties*, 20(2): 241-269.

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Burden, B. and D.S. Hillygus. 2009. “Opinion Formation, Polarization, and Presidential Reelection,” *Presidential Studies Quarterly*, 39: 619-35.

Hillygus, D.S. and T. Shields. 2008. “Southern Discomfort? Regional Differences in Voter Decision Making in the 2000 Presidential Election,” *Presidential Studies Quarterly*, 38(3): 506-520.

Hillygus, D.S. 2007. “The Dynamics of Voter Decision Making Among Minor Party Supporters: The 2000 U.S. Presidential Election,” *British Journal of Political Science*, 37(2): 225-244.

Hillygus, D.S. 2005. "Campaign Effects and the Dynamics of Turnout Intention in Election 2000," *Journal of Politics*, 66(1): 50-68.

Hillygus, D.S. 2005. "The Missing Link: Exploring the Relationship between Higher Education and Political Behavior," *Political Behavior*, 27(1): 25-47.

Hillygus, D.S. and T. Shields. 2005. "Moral Issues and Voter Decision Making in the 2004 Presidential Election," *PS: Political Science and Politics*, 38(2): 201-10.  
Reprinted in *Quantitative Methods in Practice*, D. Rochefort (ed) CQ Press, 2006.

Hillygus, D.S. and S. Jackman. 2003. "Voter Decision Making in Election 2000: Campaign Effects, Partisan Activation, and the Clinton Legacy," *American Journal of Political Science*, 47(4): 583-596.

Nie, N. and D.S. Hillygus. 2002. "Where Does Internet Time Come From?: A Reconnaissance," *IT & Society*, 1(2): 1-20.

Nie, N. and D.S. Hillygus. 2002. "The Impact of Internet Use on Sociability: Time-Diary Findings," *IT & Society*, 1(1): 1-29.

#### OTHER PUBLICATIONS

Zhou, J., D.S. Hillygus, and J. Aldrich. forthcoming. "Understanding the Trump Win: Populism, Partisanship, and Polarization in the 2016 Election," *Publications of the Bavarian American Academy*, Heidelberg University Press.

Guay, B. and D.S. Hillygus. 2018. "Online Public Opinion Polling," *Oxford Bibliographies*

Hillygus, D.S. and S. Snell. 2018. "Longitudinal Surveys: Issues and Opportunities," *Oxford Handbook on Polling and Polling Methods*. L. Atkeson and M. Alvarez, eds. New York: Oxford University Press.

Hillygus, D.S. and B. Guay. 2016. "The Virtues and Limitations of Election Polling in the United States," *Seminar Magazine*.

Hillygus, D.S. 2016. "The Practice of Survey Research: Changes and Challenges," *New Directions in Public Opinion*, second edition. Adam Berinsky, ed. Routledge Press.

Hillygus, D.S., N. Jackson, and M. Young. 2014. "Professional Respondents in Online Survey Panels," *Online Panel Research: A Data Quality Perspective*. M. Callegaro, R. Baker, P. Lavrakas, J. Krosnick, J. Bethlehem, and A. Gritz, eds.

Frankel, L. and D.S. Hillygus. 2014. "Niche Communication in Political Campaigns," *Oxford Handbook on Political Communication*. Kathleen Hall Jamieson and Kate Kenski, eds. New York: Oxford University Press.

Hillygus, D.S. and B. Burden. 2013. "Mass Polarization in the Bush Presidency," *The Presidency of George W. Bush: Perspectives on the Forty-Third President of the United States*, D. Kelly and T. Shields, eds. Texas A&M Press.

Hillygus, D.S. 2011. "The Practice of Survey Research: Changes and Challenges" *New Directions in Public Opinion*. Adam Berinsky, ed. Routledge Press.

Bishop, B. and D.S. Hillygus. 2011. "Campaigning, Debating, Advertising," *Oxford Handbook on Public Opinion and Media*. Larry Jacobs and Robert. Shapiro, eds. New York: Oxford University Press.

Hillygus, D.S. 2010. "Campaign Effects on Vote Choice," *Oxford Handbook on Elections and Political Behavior*. Jan Leighly and George C. Edwards III, eds. Oxford University Press.

Bishop, B., A. Cooper, and D.S. Hillygus. 2009. "Innovative Survey Methodologies for the Study of Attitudes Toward Terrorism and Counterterrorism Strategies," Institute for Homeland Security Solutions, Duke University.

Hillygus, D.S. 2009. "Guest Editor Introduction: Understanding the 2008 Presidential Election," *Public Opinion Quarterly* 73: 841-844.

Hillygus, D.S. 2009. "The Need for Survey Reporting Standards in Political Science," *The Future of Political Science: 100 Perspectives*, G. King, N. Nie, and K. Schlozman (eds).

Hillygus, D.S. 2008. "Internet and Politics 2008: Microtargeting," *The Publius Project*, The Berkman Center.

Hillygus, D.S. and T. Shields. 2008. "Moderation or Polarization in Candidates' Campaign Agendas?" *The Polling Report*, 24(15).

Hillygus, D.S. 2007. "Moral Values: Media, Voters, and Candidate Strategy," in *A Matter of Faith? Religion in the 2004 Presidential Election*, Brookings Institution Press.

Hillygus, D.S. 2004. Review of Models of Voting in Presidential Elections: The 2000 Election, H. Weisberg and C. Wilcox (eds), in *Presidential Studies Quarterly*, 34(3).

Brady, D. and D.S. Hillygus. 2004. "Assessing the Clinton Presidency: The Political Constraints of Legislative Policy" in *The Clinton Riddle: Perspectives on the 42nd President*, Shields, Wayne, and Kelley (eds). U of Arkansas Press.

Nie, N., D.S. Hillygus, and L. Erbring. 2003. "Internet Use, Interpersonal Relations and Sociability: A Time Diary Study" in *The Internet in Everyday Life*, Wellman and Haythornthwaite (eds). Oxford: Blackwell Publishers.

Nie, N. and D.S. Hillygus. 2001. "Education and Democratic Citizenship," in *Making Good Citizens: Education and Civil Society*, Ravitch and Viteritti (eds). Yale University Press.

## CURRENT PROJECTS

Bail, C. et al. "Assessing the Impact of the Russian Internet Research Agency on the Political Attitudes and Behaviors of American Twitter Users," under review.

*D.S. Hillygus*

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Olanrewaju A., G. Madson, D. Sunshine Hillygus and J. Reiter. "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," under review.

Lopez, J. and D.S. Hillygus. "Why So Serious?: Survey Trolls and Political Misinformation" under review.

Endres, K. D.S. Hillygus, and S. Snell, "Big Data, Big Problems: Overcoming Barriers to Consent for Data Linking," under review.

## **HONORS/AWARDS**

Trinity College Howard D. Johnson Distinguished Teaching Award, 2019.

National Science Foundation, Political Science Program (\$3.9m) "ANES Web: American National Election Study," (Co-PI with PI S. Iyengar), 2018-2021.

Provost "Together Duke" Initiative (\$454,000), "Duke Polarization Lab" (Co-PI with K. Heller, J. Moody, G. Sapiro, A. Volfovsky and PI C. Bail), 2018-2019

National Science Foundation, Political Science Program, Grant SES-1657821 (\$335,690), "Making Young Voters: Policy Reforms to Increase Youth Turnout" (PI with Co-PI J. Holbein) 2017-2019

National Science Foundation, MMS Program, Grant SES-1733835 (\$300,000), "Leveraging Auxiliary Information on Marginal Distributions in Multiple Imputation for Survey Nonresponse" (Co-PI with PI J. Reiter) 2017-2019

Bass Connections, Education and Human Development grant (\$23,000), 2017-2019

Facebook Academic Program gift (\$25,000), 2016

National Science Foundation, Political Science Program, Grant SES-1416816 (\$249,999), "Education, Engagement, and Well-being among Adolescents" (PI with Co-PI C. Gibson-Davis) 2014-2016

National Science Foundation, MMS Program, Grant SES-1131897 supplement (\$199,000), "Conducting Research Using the Survey of Income and Program Participation (SIPP) Panel Study," 2013-2015

Information Initiative at Duke, Research Incubator Award (\$75,000) "Using Big Data to Understand the American Electorate," (with L. Carin), 2013-2015

National Science Foundation, MMS Program, Grant SES-1131897 (\$2,997,591), "Triangle Census Research Network" (Senior Co-Investigator with L. Cox, D. Dunson, J. Hotz, F. Li, and PI J. Reiter and Co-PI A. Karr), 2011-2016

National Science Foundation, MMS Program, Grant SES-1061241 (\$160,000), "Multiple Imputation Methods for Handling Missing Data in Longitudinal Studies with Refreshment Samples." (with PI J. Reiter), 2011-2012

National Science Foundation, Political Science Program, SES-1110341 "Balancing Innovation and Continuity in Longitudinal Surveys" (\$38,235), 2011

*D.S. Hillygus*

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IHSS Award, Innovative Survey Methodologies(\$25,081), 2009

Robert E. Lane Award for best book published in political psychology in 2008

CAPS Junior Faculty Seed Grant (\$5000), 2008

Shorenstein Center for Press and Politics Fellow, Fall 2005

Program on the Global Demography of Aging Grant (\$17,130), 2005-06

Institute for Quantitative Social Science Research Grant (\$10,000), 2005-06

Institutional Development Initiative (\$10,000), 2005-06

Blair Center for Southern Politics, 2004 Election Survey Funding (\$85,000)

CAPS Junior Faculty Seed Grant (\$5000), 2004-2005

Milton Fund Grant, Harvard University (\$3500), 2004-2005

Harvard University Cooke-Clark Grant (\$6000)

Westview Paper Prize, 2003 Midwest Political Science Meeting

Heinz Eulau Political Behavior Fellowship, 2002-2003

Best Graduate Student Poster Award, 2002 Political Methodology Meeting

National Conference of State Legislators Women's Graduate Fellowship, 1998

## **PROFESSIONAL SERVICE**

Associate PI, American National Election Study

Associate Editor, *Political Analysis*, 2018-

Chair, POQ Advisory Committee, 2011-

Methods, Measurement, and Statistics Advisory Panel, National Science Foundation, 2018-2020

Board Member, American National Election Studies, 2010-2013, 2014-2017

Scientific Advisory Committee, U.S. Census Bureau, 2012-2018

Political Science Advisory Panel, National Science Foundation, 2010-2012

Member, Executive Council, Midwest Political Science Association, 2014-17

Member, Executive Council, Southern Political Science Association, 2014-17

Editorial Board, *American Political Science Review*, 2016-

Editorial Board, *Journal of Politics*, 2010-

Editorial Board, *Public Opinion Quarterly*, 2008-

Editorial Board, *Political Communication*, 2015-

Editorial Board, *Journal of Experimental Political Science*, 2013-

Editorial Board, *Political Behavior*, 2011-

Editorial Board, *Journal of Elections, Public Opinion and Parties*, 2008-

Editorial Board, *Political Science Network*, 2007-

Editorial Board, *The Forum*, 2011-

Editorial Board, *Political Analysis*, 2015-2017

Editorial Board, *American Journal of Political Science*, 2009-2012

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Guest Editor, *Public Opinion Quarterly* 2009 Special Issue  
AAPOR journals committee (2019)  
APSA EPOVB Best Article in Political Behavior Award Committee (2019)  
APSA Experimental Research Section: Reporting Standards Committee (2011)  
APSA Political Methodology Section: Nominations Committee (2010-2012), Diversity Committee (2005-08, 2011-12), Miller Prize (2017), Emerging Scholar (2018)  
SPSA, VO Key Award Committee, 2013  
APSA Gladys M. Kammerer Award Committee, 2012  
APSA Philip Converse Book Award Committee, 2009, 2010 and 2012  
SPSA Program Committee, 2009 and 2012  
JOP Best Paper Award Committee, 2011  
AAPOR Book Award Committee, 2011, 2016

#### **CONFERENCES ORGANIZED**

International Total Survey Error Workshop (6/18)  
Conducting Research Using the Survey of Income and Program Participation (SIPP) Panel Study, Durham, NC (2/14)  
Balancing Innovation and Continuity in Longitudinal Surveys, Durham, NC (2/11)  
Assessing Survey Quality, Cambridge, MA (4/09)  
Surveying Multiethnic America, Cambridge, MA (4/07)  
Advances in Questionnaire Design, Cambridge, MA (2/06)

#### **INVITED PRESENTATIONS(last 5 years)**

University of North Carolina (2/19)  
Emory University (11/18)  
Duke Alumni Association of Philadelphia (4/18)  
Duke Alumni Association of Los Angeles (6/17)  
Duke Alumni Association of Austin (6/17)  
Duke Alumni Association of Denver (5/17)  
Fordham University (4/17)  
Qualtrics Innovation Summit, Salt Lake City (3/17)  
Stanford Alumni Association, Durham (2/17)  
Duke Alumni Association of San Diego (11/16)  
Wake Forest University (11/16)  
Reed College (10/16)  
UNC-Wilmington (10/16)  
Duke Alumni Association of North Texas (9/16)  
Duke Alumni Association of Charlotte (5/16)  
Dept of Political Science, MIT (4/16)  
Center for the Study of Democratic Politics, Princeton (3/16)  
Appalachian State University (3/16)  
Computers, Privacy, and Data Protection Conference, Brussels (1/16)  
Political Persuasion Conference, Laguna Beach, CA (1/16)  
Duke Alumni Association of Tampa (1/16)  
Keynote, Australian Society for Quantitative Political Science, Melbourne (12/15)  
Dept of Communication, U. of Michigan (11/15)  
Dept of Political Science, UNC-Greensboro (11/15)  
Microsoft Panel on Campaign Technology, D.C. (11/15)



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Political Science Dept, U. Texas (12/14)  
ElectionsLive!, Duke University (11/14)  
American Politics Research Group, UNC (11/14)  
American Politics Workshop, UCLA (01/14)  
The American Panel Survey Workshop, Wash U (11/13)  
Intro to Survey Methods, Shanghai Jiao Tong University (06/13)  
Senior Scholar Career Presentation, Visions in Methodology, FSU (04/13)  
American Politics Workshop, Yale University (03/13)  
Google Political Innovation Summit, New York (01/13)

#### **DEPARTMENTAL AND UNIVERSITY SERVICE**

Founding Director, Duke Initiative on Survey Methodology, 2010-  
Associate Director, Institutional Review Board, Duke University, 2010-  
Social Science Research Institute Steering Committee, 2011-  
Duke Advisory Committee on Investment Responsibility, 2017-  
EHD-Bass Connections Team Leader, 2017-2020  
Social Science Research Institute (SSRI) Director Search chair, 2018  
Faculty Fellow, Duke Alumni Association, 2015-2018  
POLIS steering committee, 2015-2017  
Social Science Research Institute Planning Committee, 2012  
Behavior and Identity Field Chair, 2011-2012, 2014, 2016-2018  
Behavior and Identity Workshop Organizer, 2010-2012, 2016  
American Politics Field Organizer, 2010-2012  
REP Search Committee, Duke Political Science, 2013, 2017  
China Search Committee, Duke Political Science, 2011  
Graduate Admissions Committee, Duke Political Science, 2009, 2014  
Undergraduate Curriculum Committee, Duke Political Science, 2009  
Faculty Organizer, Duke Political Science Graduate Orientation, 2009  
Harvard University Faculty Advisory Group for Metrics and Analysis, 2006-2009  
Faculty Advisory Board for the Social Sciences, Harvard FAS, 2008-2009  
Executive Committee, Center for American Political Studies, 2003-2009  
Organizer, Political Psychology and Behavior Workshop, 2003-2008  
Standing Committee on Women, Harvard FAS 2004-2005